

Europäisches Patentamt

European Patent Office

Office européen des brevets

11 Publication number:

0 282 944 A2

(12)

EUROPEAN PATENT APPLICATION

21) Application number: 88103999.4

2 Date of filing: 14.03.88

(a) Int. Cl.4: C07D 231/20 , C07D 231/30 , C07D 231/32 , C07D 405/12 , C07D 409/12 , C07F 9/65 , C07F 7/08 , C07F 7/18 , A01N 43/56 , A01N 57/16 , A01N 55/00 , //C07C149/40 , C07C147/107,C07C63/68 , C07C149/247

Priority: 17.03.87 JP 61937/87
 17.07.87 JP 179797/87
 30.09.87 JP 247601/87
 13.01.88 JP 5449/88

- Date of publication of application: 21.09.88 Bulletin 88/38
- Designated Contracting States:
 AT BE CH DE ES FR GB GR IT LI LU NL SE

Applicant: NISSAN CHEMICAL INDUSTRIES LTD.
 7-1, 3-chome Kanda-Nishiki-cho Chiyoda-ku Tokyo(JP)

inventor: Baba, Masatoshi
Copo Yamaichi 203, Hon-machi
Wako-shi Saltama-ken(JP)
Inventor: Kakuta, Takuya
5-17-304, Narashino 1-chome
Funabashi-shi Chiba-ken(JP)
Inventor: Tanaka, Norio
788-74, Kowagama

Funabashi-shi Chiba-ken(JP)

Inventor: Oya, Elichi

Nissan Kagaku Kogyo Yatsu-ryo 5-32-9,

Yatsu

Narashino-shi Chiba-ken(JP)

Inventor: Ikai, Takashi

19-7, Nishishinjuku 7-chome

Shinjuku-ku Tokyo(JP)

Inventor: Nawamaki, Tsutomu

7-3-102, Oto 6-chome Yono-shi Saltama-ken(JP) Inventor: Watanabe, Shigeomi

14-46-103, Higashiomiya 3-chome

Omiya-shi Saitama-ken(JP)

Representative: Wächtershäuser, Günter, Dr. Tal 29
D-8000 München 2(DE)

Pyrazole derivative and herbicid containing it.

1. A pyrazole derivative having the formula:

wherein A is alkyl, alkenyl or alkynyl; B is hydrogen, alkyl, halogen, haloalkyl, alkoxy, alkylthio, alkoxyalkyl, alkylthioalkyl or alkoxycarbonyl; X is alkyl, alkoxy, halogen, nitro, cyano, haloalkyl, alkoxyalkyl, alkylcarbonyl, alkoxycarbonyl, aminocarbonyl substituted by hydrogen or alkyl, haloalkoxy, alkylthio or alkylthioalkyl; Y is -COOR1 (wherein R1 is hydrogen, alkyl, etc.), -COO-L-OR1 (wherein L is alkylene which may be substituted), -COO-L-R2 (wherein R2 is phenyl group which may be substituted), -COO-M (wherein M is 3 to 6-membered alicyclic residue containing not more than 2 sulfur or oxygen atoms), -COO-L-M, -COO-L-O-L-R2, -COO-L-S(O)_n-R1, -CON(R3)(R4) (wherein each of R3 and R4 is hydrogen, alkyl etc.), a

(wherein R5 is alkyl),

-CONHSO₂CH₃, -CONHSO₂CF₃, -COO-L-N(R3)(R4), -COO-L-CO-R1, -COO-L-CO-R1, -COO-L-CN, -COO-L-NO₂, -COOSi(R5)₃, -COO-N = C(R6)(R7) (wherein each of R6 and R7 is alkyl),

-COO-L-O-SO₂-R1, -COO-L-O-CO-R1, -COO-L-O-R1, -COO-L-Si(R5)₃, -C(O)S-R1, -C(S)O-R1, -C(S)S-R1, -L-O-R1, -L-O-R8 (wherein R8 is hydrogen or alkyl), -L-O-M, -L-O-L-M, -L-NR8R9 (wherein R9 is alkyl group), -L-O-CH₂Ph, -L-O-L-COOR9, -L-CN, -L-S(O)_n-R1, -L-S-L-O-R9, -L-O-COR9, -L-O-SO₂R9, -L-COOR8, -C = CHOR8 or -L-O-L-CN; Z is halogen, nitro, alkoxy, trifluoromethyl, cyano or -S(O)_nR10 (wherein R10 is alkyl or haloalkyl); V is a hydrogen atom, a halogen atom, an alkyl group having from 1 to 4 carbon atoms or an alkoxy group having from 1 to 4 carbon atoms, a haloalkyl group having from 1 to 4 carbon atoms, an alkoxy group having from 1 to 4 carbon atoms, an alkoxycarbonyl group having from 2 to 5 carbon atoms, a haloalkoxy group having from 1 to 3 carbon atoms, a nitro group, a cyano group or a -S(O)_n-R group (wherein n is as defined above and R is an alkyl group having from 1 to 4 carbon atoms); Q is hydrogen, alkyl, alkenyl, alkynyl, cyanomethyl, -C(O)-R11 (wherein R11 is phenyl group which may be substituted, alkyl, alkoxy or hydroxyl), -S(O)₂R11, -P(O)(OR11)₂, -L-C(O)-R11, -L

N(R12)(R13) (wherein each of R12 and R13 is hydrogen or alkyl), -L-R14 (wherein R14 is phenyl which may be substituted, alkyl, alkoxy or hydroxy), -L-N(R12)(R13), a -L-OR15 (wherein R15 is hydrogen, alkyl or alkenyl), -L-OC(O)R16 (wherein R16 is alkyl or alkoxy), -L-S(O)_nR15, -L-SC(O)R12,

(wherein each of L1 and L2 is methylene, oxygen or sulfur and R16 is hydrogen or alkyl), and a sait thereof, useful as a herbicide.

PYRAZOLE DERIVATIVE AND HERBICIDE CONTAINING IT

The present invention relates to novel 4-benzoylpyrazole derivatives and selective herbicides containing such derivatives as active ingredients, which are useful particularly as upland field herbicides.

Various herbicides have been developed for practical use from extensive research and development of herbicides for many years, and such herbicides have contributed to a reduction of the labor force required for controlling weeds or to improvement of the productivity of agricultural or horticultural plants.

Even now, it is still desired to develop a new herbicide having superior herbicidal properties. In particular, it is desired to develop an agricultural or horticultural herbicide which is capable of selectively controlling weeds without adversely affecting the crop plant and at a low dose. However, conventional herbicides do not necessarily provide such desired herbicidal properties.

On the other hand, certain compounds of 4-benzoylpyrazole derivatives are known to have herbicidal activities. For example, pyrazolate (common name) and pyrazoxyfen (common name) are practically used as herbicides for paddy fields. While exhibiting excellent herbicidal activities as paddy field herbicides, these compounds are not suitable as upland herbicides since their herbicidal activities are weak against weeds of upland fields. Among 4-benzoylpyrazole derivatives, it is desired to develop a superior compound useful as an upland field herbicide.

The present invention provides a pyrazole derivative having the formula:

30

20

25

wherein A is an alkyl group having from 1 to 3 carbon atoms, an alkenyl group having from 2 to 4 carbon atoms or an alkynyl group having from 2 to 4 carbon atoms; B is a hydrogen atom, an alkyl group having from 1 to 3 carbon atoms, a halogen atom, a haloalkyl group having from 1 to 3 carbon atoms, an alkoxy group having from 1 to 3 carbon atoms, an alkylthio group having from 1 to 3 carbon atoms, an alkoxyalkyl group having from 2 to 4 carbon atoms, an alkylthioalkyl group having from 2 to 4 carbon atoms or an alkoxycarbonyl group having from 2 to 4 carbon atoms; X is an alkyl group having from 1 to 6 carbon atoms, an alkoxy group having from 1 to 6 carbon atoms, a halogen atom, a nitro group, a cyano group, a haloalkyl group having from 1 to 6 carbon atoms, an alkoxyalkyl group having from 2 to 6 carbon atoms, an alkylcarbonyl group having from 2 to 6 carbon atoms, an alkoxycarbonyl group having from 2 to 6 carbon atoms, an aminocarbonyl group substituted independently by hydrogen or alkyl having from 1 to 6 carbon atoms, a haloalkoxy group having from 1 to 6 carbon atoms, an alkylthio group having from 1 to 6 carbon atoms or an alkylthioalkyl group having from 2 to 6 carbon atoms; Y is a -COOR1 group (wherein R1 is a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms, a cycloalkyl group having from 3 to 8 carbon atoms, a cycloalkylalkyl group having from 4 to 8 carbon atoms, an alkynyl group having from 3 to 6 carbon atoms, an alkenyl group having from 2 to 6 carbon atoms, a haloalkyl group having from 1 to 6 carbon atoms, a halocycloalkyl group having from 3 to 8 carbon atoms, a haloalkynyl group having from 3 to 6 carbon atoms, a haloalkenyl group having from 2 to 6 carbon atoms or a phenyl group which may be substituted by alkyl having from 1 to 3 carbon atoms, halogen, nitro or alkoxy having from 1 to 3 carbon atoms), a -COO-L-OR1 group (wherein L is an alkylene group having from 1 to 6 carbon atoms which may be substituted by alkyl having from 1 to 3 carbon atoms, and R1 is as defined above), a -COO-L-R2 group (wherein L is as defined above, and R2 is a phenyl group which may be substituted by alkyl having from 1 to 3 carbon atoms, halogen, nitro or alkoxy having from 1 to 3 carbon atoms), a -COO-M group (wherein M is a 3 to 6-membered alicyclic residue containing not more than 2 sulfur or oxygen atoms and formed by a linkage of from 1 to 4 carbon atoms), a -COO-L-M group (wherein L and M are as defined above), a COO-L-O-L-R2 group (wherein L and R2 are as defined above), a -COO-L-S(O)_n-R1 group (wherein L and R1 are as

defined above, and n is an integer of from 0 to 2), a -CON(R3)(R4) group (wherein each of R3 and R4 is a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms, a cycloalkylalkyl group having from 4 to 8 carbon atoms, an alkoxy group having from 1 to 6 carbon atoms, an alkoxyl group having from 2 to 6 carbon atoms, an alkenyl group having from 2 to 6 carbon atoms, a haloalkyl group having from 1 to 6 carbon atoms, a haloalkyl group having from 2 to 6 carbon atoms, a haloalkyl group having from 2 to 6 carbon atoms, a haloalkenyl group having from 2 to 6 carbon atoms, a haloalkenyl group having from 2 to 6 carbon atoms, a haloalkenyl group having from 2 to 6 carbon atoms or a phenyl group which may be substituted by alkyl having from 1 to 3 carbon atoms, halogen, nitro or alkoxy having from 1 to 3 carbon atoms), a

group (wherein n is an integer of from 4 to 6), a

10

15

20

25

35

group (wherein R5 is an alkyl group having from 1 to 3 carbon atoms), a

group, a -CONHSO₂CH₃ group, a -CONHSO₂CF₃ group, a -COO-L-N(R3)(R4) group (wherein L, R3 and R4 are as defined above), a -COO-L-CO-R1 group (wherein L and R1 are as defined above), a -COO-L-CO-CR1 group (wherein L and R1 are as defined above), a -COO-L-NO₂ group (wherein L is as defined above), a -COO-L-NO₂ group (wherein L is as defined above), a -COO-N=C(R6)(R7) group (wherein each of R6 and R7 which may be the same or different is an alkyl group having from 1 to 3 carbon atoms), a

group (wherein n is an integer of from 4 to 6), a -COO-L-O-SO₂-R1 group (wherein L and R1 are as defined above), a -COO-L-O-CO-R1 group (wherein L and R1 are as defined above), a -COO-L-O-L-O-R1 group (wherein L and R1 are as defined above), a -COO-L-Si(R5)3 group (wherein L and R5 are as defined above), a -C(O)S-R1 group (wherein R1 is as defined above), a -C(S)O-R1 group (wherein R1 is as defined above), a -C(S)S-R1 group (wherein R1 is as defined above), a -L-O-R1 group (wherein L and R1 are as defined above), a -L-O-L-O-R8 group (wherein L is as defined above, and R8 is a hydrogen atom or an alkyl group having from 1 to 6 carbon atoms), a -L-O-M group (wherein L and M are as defined above), a -L-O-L-M group (wherein L and M are as defined above), a -L-NR8R9 group (wherein R8 is as defined above, and R9 is an alkyl group having from 1 to 6 carbon atoms), a -L-O-CH₂Ph group (wherein L is as defined above), -L-O-L-COOR9 group (wherein L and R9 are as defined above), a -L-CN group (wherein L is as defined above), a -L-S(O)n-R1 group (wherein L and R1 are as defined above, and n is an integer of from 0 to 2), a -L-S-L-O-R9 group (wherein L and R9 are as defined above), a -L-O-COR9 group (wherein L and R9 are as defined above), a L-O-SO2R9 group (wherein L and R9 are as defined above), a -L-COOR8 group (wherein L and R8 are as defined above), a -CH = CHOR8 group (wherein R8 is as defined above) or a -L-O-L-CN group (wherein L is as defined above); Z is a halogen atom, a nitro group, an alkoxy group having from 1 to 3 carbon atoms, a trifluoromethyl group, a cyano group or a -S(O),R10 group (wherein R10 is an alkyl group having from 1 to 3 carbon atoms or a haloalkyl group having from 1 to 3 carbon atoms, and n is an integer of from 0 to 2); V is a hydrogen atom, a halogen atom, an alkyl group having from 1 to 4 carbon atoms or an alkoxy group having from 1 to 4 carbon atoms; W is a hydrogen atom, a halogen atom, an alkyl group having from 1 to 4 carbon atoms, a haloalkyl group having from 1 to 4 carbon atoms, an alkoxy group

٠,

having from 1 to 4 carbon atoms, an alkoxyalkyl group having from 2 to 6 carbon atoms, an alkoxycarbonyl group having from 2 to 5 carbon atoms, a haloalkoxy group having from 1 to 3 carbon atoms, a nitro group, a cyano group or a -S(O)n-R group (wherein n is as defined above and R is an alkyl group having from 1 to 4 carbon atoms); Q is a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms which may be substituted by halogen, an alkenyl group having from 1 to 6 carbon atoms which may be substituted by halogen, an alkynyl group having from 1 to 6 carbon atoms which may be substituted by halogen, a cyanomethyl group, a -C(O)-R11 group (wherein R11 is a phenyl group which may be substituted by the same or different substituents selected from the group consisting of alkyl having from 1 to 6 carbon atoms, alkenyl having from 1 to 6 carbon atoms, alkynyl having from 1 to 6 carbon atoms, haloalkyl having from 1 to 6 carbon atoms, haloalkenyl having from 1 to 6 carbon atoms, haloalkynyl having from 1 to 6 carbon atoms, halogen, nitro and trifluoromethyl, an alkyl group having from 1 to 6 carbon atoms, an alkoxy group having from 1 to 6 carbon atoms or a hydroxyl group), a -S(O)2R11 group (wherein R11 is as defined above), a -P(O)(OR11)₂ group (wherein R11 is as defined above), a -L-C(O)-R11 group (wherein L and R11 are as defined above), a -L-C(O)-N(R12)(R13) (wherein L is as defined above, each of R12 and R13 is a hydrogen atom or an alkyl group having from 1 to 6 carbon atoms), a -L-R14 group (wherein L is as defined above, R14 is a phenyl group which may be substituted by the same or different substituents selected from the group consisting of halogen, nitro and trifluoromethyl, an alkyl group having from 1 to 6 carbon atoms, an alkoxy group having from 1 to 6 carbon atoms or a hydroxy group), a -L-N(R12)(R13) group (wherein L, R12 and R13 are as defined above), a -L-OR15 group (wherein R15 is a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms or an alkenyl group having from 1 to 6 carbon atoms), a -L-OC(O)R16 group (wherein R16 is an alkyl group having from 1 to 6 carbon atoms or an alkoxy group having from 1 to 6 carbon atoms), a -L-S(O),R15 group (wherein R15 is as defined above, and n is an integer of 0 or 2), a -L-SC(O)R12 group (wherein R12 is as defined above),

(wherein each of L1 and L2 is a methylene group, an oxygen atom or a sulfur atom, R16 is a hydrogen atom or an alkyl group having from 1 to 3 carbon atoms, and n is an integer of 2 or 3), and a salt thereof.

The present invention also provides a selective herbicidal composition comprising a herbicidally effective amount of at least one pyrazole derivative of the formula I as defined above or its salt and an agricultural carrier or diluent.

Further, the present invention provides a method for selectively controlling weeds, which comprises applying the pyrazole derivative of the formula I as defined above or its salt to the locus to be protected.

Now, the present invention will be described in detail with reference to the preferred embodiments.

In the compound of the formula I of the present invention, A, B, X, Y, Z and Q are preferably selected from the following substituents, respectively:

A: Me, Et, n-Pr, i-Pr, CH2CH = CH2, CH2C=CH

B: H, Me, Et, n-Pr, i-Pr, C1, Br, CH₂C1, CF₃, OMe, OEt, OPr-i, SMe, CH₂OMe, CH₂SMe, CO₂Me, CO₂Et X: Me, Et, n-Pr, i-Pr, n-Bu, i-Bu, s-Bu, t-Bu, OMe, OEt, OPr-n, OPr-i, OBu-n, OBu-i, OBu-s, OBu-t, F, C1, Br, I, NO₂, CN, CH₂F, CHF₂, CF₃, CH₂CF₃, CH₂C1, CC1₃, CHC1Me, CH₂CH₂C1, CHC1CH₂C1, CH₂Br, CHBrMe, CH₂CH₂Br, CH₂OMe, CH₂OEt, CH₂OPr-n, CH₂OPr-i, CH₂OBu-n, CH₂OBu-i, CH₂OBu-s, CH₂OBu-t, CHMeOMe, CHMeOEt, CHMeOPr-n, CHMeOPr-i, CHMeOBu-n, CHMeOBu-i, CHMeOBu-s, CHMeOBu-t, CH₂CH₂OMe, CH₂CH₂OEt, CH₂CH₂OPr-i, Ac, COEt, COPr-n, COPr-i, COOMe, COOEt, COOPr-i, CONHMe, CONHEt, CONMe₂, CONEt₂, CONEtMe, OCHF₂, OCF₃, OCH₂CF₃, SMe, SEt, CH₂SMe, CH₂SEt, CHMeSMe, CHMeSEt

Y : CH₂OH, CH₂OMe, CH₂OEt, CH₂OPr-n, CH₂OPr-i, CH₂OBu-n, CH₂OBu-i, CH₂OBu-s, CH₂OBu-t, CH₂OAm-n, CH₂OAm-i, CH₂OAm-t,

55

40

$$CH_2OC_6H_{1:3-\Pi}$$
, CH_2O , CH_2O , CH_2O , $CH_2OCH = CH_2$,

CH₂OCH₂CH = CH₂, CH₂OCH₂CMe = CH₂, CH₂OCHMeCH = CH₂, CH₂OCH₂C=CH, CH₂OCHMeC=CH, CH₂OCH₂CH₂CH, CH₂OCH₂CH, CH₂OCH₂CH, CH₂OCH₂CH, CH₂OCH₂CH, CH₂OCH₂CH, CH₂CH, CH₂OCH₂CH, CH₂CH, CH₂C

CH2OCH2CC1 = CH2, CH2OCH2CC1 = CHC1, CH2OCH2CH2OMe, CH2OCH2CH2OEt, CH2OCH2CH2OPr-i,

$$CH_{2}O \longrightarrow CH_{2}O \longrightarrow CH_{2}O \longrightarrow S$$

$$CH_{2}OCH_{2} \longrightarrow CH_{2}OCH_{2} \longrightarrow O$$

$$CH_{2}OCH_{2} \longrightarrow O$$

CH₂OPh, CH₂OPh-C1-4, CH₂OPh-NO₂-4, CH₂NHMe, CH₂NHEt, CH₂NMe₂, CH₂NEt₃, CH₂NEtMe, CH₂OCH₂Ph, CH₂OCH₂COOMe, CH₂OCH₂COOEt, CH₂OCHMeCOOMe, CH₂OCH₂COOBu-t, CH₂OCHMeCOOEt, CH₂CN, CH₂SMe, CH₂SEt, CH₂SPr-n, CH₂SPr-i, CH₂SBn-t, CH₂SCH₂CH = CH₂, CH₂SCH₂C=CH,

CH₂SCH₂CH₂C1, CH₂SOMe, CH₂SOEt, CH₂SO₂Me, CH₂SO₂Et, CH₂SO₂Pr-n, CH₂SO₂Pr-i, CH₂SCH₂CH₂OMe, CH₂SCH₂CH₂OEt, CH₂OCOEt, CH₂OCOPr-i, CH₂OSO₂Me, CH₂OSO₂Et, CH₂OCH₂CH₂CN, CHMeOH, CHMeOMe, CHMeOEt, CHMeOPr-n, CHMeOPr-i, CHMeOBu-n, CHMeOBu-i, CHMeOBu-s, CHMeOBu-t,

55

50

40

5

CHMeOCH2CH2OMe, CHMeOCH2CH2Et,

CHMeOCH 2 S . CHMeOPh, CHMeNHMe,

CHMeNMe₂, CHMeNEt₂, CHMeOCH₂COOMe, CHMeOCH₂COOEt, CHMeOCHMeCOOMe, CHMeCN, CHMeSMe, CHMeSEt, CHMeSPr-n, CHMeSPr-i, CHMeSCH₂CH = CH₂, CHMeSCH₂C≡CH,

CHMeSCH 2

25 CHMeSCH₂CH₂CL, CHMeSOMe, CHMeSOEt, CHMeSO₂Me, CHMeSO₂Et, CHMeSO₂Pr-i, CHMeSCH₂CH₂OMe, CHMeSPh, CHMeOAc, CHMeOCOEt, CHMeOSO₂Me, CHMeOSO₂Et, CHMeOCH₂CH₂CN, CMe₂OH, CMe₂OMe, CMe₂OEt, CMe₂OPr-n, CMe₂OPr-i, CMe₂OCH = CH₂, CMe₂OCH₂CH = CH₂, CMe₂OCH₂C=CH, CMe₂OCH₂CL,

CMezOCHzCHzOMe, CMezO - ,

Chezo , Cheznine, Chezninez,

CMe₂OCH₂COOMe, CMe₂CN, CMe₂SMe, CMe₂SEt, CMe₂SO₂Me, CMe₂SO₂Et, CMe₂OAc, CMe₂OSO₂Me, CH₂COOMe, CH₂COOMe, CH₂COOMe, CH₂COOMe, CH₂COOMe, CH₂COOMe, CH₂COOMe, CH₂COOMe, CH₂COOMe, CH₂CH₂COOMe, COOMe, COOMe,

COOCH 2

5

10

15

20

30

35

45

50

 $\label{eq:coch2cl} \begin{aligned} &\text{COOCH}_2\text{CC1} = \text{CH}_2, \; &\text{COOCH}_2\text{CD1} = \text{CHC1}, \; &\text{COOCH}_2\text{OMe}, \; &\text{COOCH}_2\text{CH}_2\text{OMe}, \; &\text{COOCH}_2\text{CH}_2\text{CEt}, \; &\text{COOCH}_2\text{CH}_2\text{CEt}, \; &\text{COOCH}_2\text{CH}_2\text{CE1}, \; &\text{COOCH}_2\text{CH}_2\text{COOCH}_2\text{CH}_2\text{CE1}, \; &\text{COOCH}_2\text{CH}_2\text{CE1}, \; &\text{COOCH}_2\text{CH}_2\text{COOCH}_2\text{COOCH}_2\text{CH}_2\text{COOCH}_2\text{$

COOCH₂COMe, COOCH₂COBu-t, COOCH₂COPr-i, COOCH₂COPh, COOCH₂COMe, COOCH₂COOEt, COOCHMeCOOMe, COOCMe₂OOMe, COOCH₂CH₂OCH₂CH = CH₂, COOCH₂CH₂OCH₂CH₂CH, COOCH₂CH₂OPh, COOCH₂CH₂OCH₂CH₂Ph, COOCH₂SiMe₃, COOSiMe₃, COOSiEt₃, COOPh, COOPh-C1-4, COOPh-OMe-4, COOPh-NO₂-4, COOCH₂Ph, COOCH₂Ph-C1-2, COOCH₂Ph-C1-4, COOCHMePh, COOCH₂CH₂Ph,

$$coo \leftarrow coo \leftarrow coo$$

C(O)SMe, C(O)SEt, C(O)SPr-i, C(O)SPr-n, C(O)SBu-n, C(O)SBu-t, C(O)SBu-s, C(O)SBu-i, C(S)OMe, C(S)OEt, C(S)OPr-i, C(S)OPr-n, C(S)OBu-n, C(S)OBu-t, C(S)OBu-s, C(S)OBu-i, CSSMe, CSSEt, CSSPr-n, CSSPr-i, CONMe₂, CONHMe, CONEt₂, CONHEt, CONHPr-n, CONHPr-i, CONHBu-t, CONHBu-s, CONHBu-i, CONHBu-n, CONHAm-t, CONPr₂-i, CONPr₂-n, CONHPh, CONHPh-Me-4, CONHPh-NO₂-4,

CON CONMONNE, CONHCH2CH =
$$CH_2$$
,

CONMeOMe, CONHCH₂CH = CH₂, CON(CH₂CH = CH₂)₂, CONHCH₂C=CH, CON(CH₂C=CH)₂, CONMePh, CONEtPh, CON(Me)Ph-Me-4, CONHSO₂Me, CONHSO₂CF₃, COON = CMe₂,

5

. 15

25

30

35

45

$$COON = \bigcirc, \quad COON = \bigcirc$$

COOCH2OCOMe, COOCH2OCOBu-t,

15

30

40

Z: F, Cl,Br, I, NO₂, OMe, OEt, OPr-n, OPr-i, CF₃, CN, SMe, SOMe, SO₂Me, SCF₃, SOCF₃, SO₂CF₃
Q: H, Me, Et, n-Pr, i-Pr, n-Bu, i-Bu, s-Bu, t-Bu, CH₂CH₂Cl, CH₂CF₃, CHClMe, CH₂CH₂Br, CHClCH₂Cl, CH₂CH = CH₂, CH₂CMe = CH₂, CH₂CH = CHMe, CH₂C=CH, CH₂CCl = CH₂, CH₂CN, CH₂Ph, CH₂Ph-Cl-2, CH₂Ph-Cl-3, CH₂Ph-Me-2,

CH₂Ph-Me₂-2,4, CH₂Ph-Me-4, CHMePh, CHEtPh, CH₂Ph-NO₂-2, CH₂Ph-CF₃-3, CH₂OMe, CH₂OEt, CH₂OH, CHMeOH, CH₂NHMe, CH₂NMe₂, CHMeNMe₃, CH₂COPh, CH₂COPh-NO₂-4, CH₂COPh-Me-4, CH₂COPh-C1-4, CH₂COPh-Me₂-2,4, CH₂COPh-CF₃-4, CH₂AC, CH₂COEt, CHMeAC, CH₂CO₂Me, CH₂CO₂Et, CH₂CO₂Pr-n, CH₂CO₂Pr-i, CH₂CO₂Bu-t, CH₂CO₂H, CHMeCO₂H, CH₂CONHMe, CH₂CONMe₃, CH₂CONHEt, CH₂CONEt₃, CH₂CONPr-n₂, CH₂OCO₂Bu-t, CH₂OCO₂H, CH₂COEt, CH₂COPr-i, CH₂COBu-t, CH₂OCO₂Me, CH₂OCO₂Et, CH₂OCO₂Pr-i, CH₂OCO₂Bu-t, CH₂SMe, CH₂SEt, CH₂SCH₂CH = CH₂, CH₂SAC, CH₂SCOBu-t, CH₂SO₂Me, CH₂SO₂Et, CH₂SO₂CH₂CH = CH₂, CH₂NHCO₂He, CH₂NHCO₂He, CH₂NHCO₂Me, CH₂NHCO₂Me, CH₂NHCO₂Me, COPh-NO₂-2, COPh-C1₂-2,4, Ac, COEt, COPr-n, COPr-i, COBu-n, COBu-t, COCH₂C1, COCHC1₂, COCC1₃, COCF₃, COCH₂OMe, COCH₂OPh, COCH₂CH = CHCH₃, CO₂Me, CO₂Et, CO₂Bu-t, CO₂Pr-i, CONHMe, CONMe₂, CONHEt, CONEt₂, CONPr-n₂, CON(CH₂CH = CH₂)₂, CONMePh,

CO₂CH₂Ph, CO₂Ph, SO₂Me, SO₂Et, SO₂CH₂CH = CH₂, SO₂Ph, SO₂Ph-Me-4, SO₂Ph-C1-4, SO₂Ph-(NO₂)₂-2,4, SO₂CF₃, P(=0)(OMe)₂, P(=0)(OEt)₂, P(=0)(OPr-n)₂, P(=0)(OPr-i)₂, P(=S)(OMe)₂, P(=S)(OEt)₂, P(=O)-OMeOPh, P(=0)(OCH₂CH = CH₂)₂, P(=0)OPhOCH₂CH = CH₂

When Q is a hydrogen atom, the compound may readily form a salt with a metal or with an organic base.

As such a metal, sodium, potassium, calcium, lithium, barium, magnesium, iron, copper, nickel or manganese may be mentioned.

As such an organic base, methylamine, dimethylamine, trimethylamine, ethylamine, diethylamine, triethylamine, n-propylamine, di-n-propylamine, i-propylamine, di-i-propylamine, n-butylamine, i-butylamine, sec-butylamine, tert-butylamine, piperidine, pyrrolidine, morpholine, pyridine, N,N-dimethylaniline or choline may be mentioned.

In the course of researches on the herbicidal properties of various organic compounds with an aim to develop useful herbicides, the present inventors have found that the above-mentioned compound of the present invention exhibits excellent herbicidal activities against narrow leaf weeds (gramineous and cyperaceous weeds) and against broad leaf weeds and no substantial phytotoxicity against useful plants e.g. crop plants such as Zea mays (corn), Sorghum bicolor (sorgo), Triticum spp (wheat) and Hordeum vulgare (barley). The present invention has been accomplished on the basis of this discovery.

The compound of the present invention exhibits strong herbicidal activities in each of soil treatment, soil incorporation treatment and foliage treatment. On the other hand, it exhibits no phytotoxicity against crop plants such as Zea mays, Sorghum bicolor, Triticum spp and Hordeum vulgare in a practical application in any of soil treatment, soil incorporation treatment and foliage treatment. Thus, the compound of the present invention has high selectivity and it is extremely effective for controlling weeds during the cultivation of these crop plants. Namely, the compound of the present invention exhibits strong herbicidal activities against noxious weeds such as Setaria viridis (green foxtail), Echinochloa crus-galli (barnyardgrass),

Amaranthus lividus (livid amaranth), Polygonum longisetum (persicaria blumei gross), Xanthium strumarium (cocklebur), Abutilon theophrasti (velvet leaf) and Cyperus esculentus (yellow nutsedge), which develop during the cultivation of Zea mays or Sorghum bicolor. The herbicidal activities against gramineous weeds and Cyperus esculentus are remarkably high and extremely unique. Heretofore, during the cultivation of Zea mays or Sorghum bicolor, it has been common to employ atrazine or cyanazine as a triazine-type herbicide, or alachlor or metolachlor as an acid anilide-type herbicide. However, atrazine and cyanazine have poor herbicidal activities against gramineous weeds although they show high activities against broad leaf weeds, and their activities against Cyperus esculentus are very low. On the other hand, alachlor and metolachlor have poor activities against broad leaf weeds although their activities against gramineous weeds are high, and their activities against Cyperus esculentus are very poor. Thus, it has been difficult to eradicate all the weed species by a single application of such herbicides.

As a result of various studies, the present inventors have found the compound of the present invention which exhibits excellent herbicidal effects against a wide range of weeds, and the present invention has been accomplished on the basis of this discovery. The compound of the present invention also has a feature that it exhibits no phytotoxicity against crop plants such as Zea mays, Sorghum bicolor, Triticum spp and Hordeum vulgare and thus can safely be applied to the fields for such crop plants.

Further, the compound of the present invention includes a compound which shows selectivity between Oryza sativa (rice) and Echinochloa crus-galli (barnyardgrass), and it also includes a compound having selectivity for a useful plant such as Gossypium spp (cotton), Beta vulgaris (sugar beat) or Glycine max - (soybean).

Heretofore, it has been known that 4-benzoylpyrazole derivatives have excellent herbicidal activities. For example, pyrazolate (common name) is commercially available and widely used for practical application. However, such conventional herbicides are restricted in their application to paddy fields, and their activities are very poor in their application to upland fields. Whereas, as a result of extensive research for many years on 4-benzoylpyrazole derivatives, the present inventors have finally found that the compound of the present invention which simultaneously satisfies the various conditions for substituents in the structure as specified above, exhibits strong herbicidal activities in the application to upland fields in each of soil treatment, soil incorporation and foliage treatment. It has been found that the compound of the present invention exhibits particularly high activities against gramineous weeds and Cyperus esculentus.

The compound of the present invention can readily be prepared by any one of the following reactions.

11

20

30

35

40

50

$$Z \xrightarrow{X} COOH + B \xrightarrow{N} OH$$

A 30

. **55**

$$z \xrightarrow{Y} coc e + N \xrightarrow{N} oH$$

(3)

$$\begin{array}{c|c}
B & O & C & V & W \\
N & O - Q & & & & \\
N & O - Q & & & & \\
\end{array}$$

In the above formulas, A, B, X, Y, Z, Q, V and W are as defined above, E is a halogen atom, a m thanesulfonyloxy group or a p-toluenesulfonyloxy group. Further,

$$\begin{array}{c|c}
B \\
N \\
N \\
OH
\end{array}$$
 is a tautomer of $\begin{array}{c|c}
N \\
N \\
A
\end{array}$

and may be represented by either formula. DCC is N,N'-dicyclohexylcarbodiimide.

Reaction scheme (1) represents a reaction wherein benzoic acid having suitable substituents and 5-hydroxypyrazole are reacted in an inert solvent in the presence of DCC and a base to obtain 4-benzoyl-5-hydroxypyrazole. DCC is used in an amount of from 1.0 to 1.5 mols per mol of the benzoic acid and pyrazole. The solvent may be any solvent so long as it is inert to the reaction. Particularly preferred is tert-butyl alcohol, tert-amyl alcohol or isopropyl alcohol. The base may not necessarily be required. However, in general, the yield can be improved by using a base. There is no particular restriction as to the base, but potassium carbonate or sodium carbonate may preferably be employed. The reaction temperature may range from room temperature to the boiling point of the solvent, but is preferably from 50 to 100°C.

The reaction time is usually from 0.5 to 20 hours.

Reaction scheme (2) shows a reaction wherein benzoyl chloride having suitable substituents and 5-hydroxypyrazole are reacted to form a benzoyl est r, which is then rearranged to a 4-benzoyl compound.

The benzoyl esterification can be accomplished in an inert solvent (such as an aromatic hydrocarbon, a fatty acid ester, a halogenated hydrocarbon, an ether, acetonitrile, dimethylsulfoxide or N,N'-dimethylformamide) or in a two phase system with such a solvent and water or in a mixture of such solvents in the presence of a suitable dehydrochlorinating agent (e.g. an inorganic base such as sodium hydroxide, potassium hydroxide or sodium hydrogencarbonate, or an organic base such as pyridine or triethylamine) at a temperature of from room temperature to 100°C for from 10 minutes to 5 hours.

35

The rearrangement reaction can be accomplished by means of a Lewis acid such as anhydrous aluminum chloride or a base. As the base, potassium carbonate, calcium hydroxide or sodium carbonate may be used. The Lewis acid or base is used usually in an amount of from 1 to 10 mol times.

No solvent is required. However, in some cases, it is advantageous to use a solvent having a suitable boiling point to improve the operation efficiency or the yield. As such an advantageous example, use of dioxane or diglyme may be mentioned.

The reaction temperature is usually from 50 to 150°C, and the reaction time is usually from 15 minutes to 10 hours.

Reaction scheme (3) shows a reaction wherein 4-benzoyl-5-hydroxypyrazole is condensed with a halide, a methanesulfonic acid ester or a p-toluenesulfonic acid ester.

For this reaction, it is preferred to employ from 1 to 3 mol times of a dehydrohalogenating agent. As such a dehydrohalogenating agent, an inorganic base such as sodium hydroxide, potassium hydroxide, sodium carbonate, sodium hydrogencarbonate or potassium carbonate, or an organic base such as pyridine or triethylamine, may be mentioned.

There is no particular restriction as to the solvent so long as it is inert to the reaction. A wide range of solvents including an aromatic hydrocarbon, a fatty acid ester, a halogenated hydrocarbon, an ether, a ketone, an aliphatic hydrocarbon, acetonitrile, dimethylsulfoxide and dimethylformamide may be used.

The reaction temperature may be optionally selected within a range of from room temperature to the boiling point of the solvent. The reaction time is usualy from 30 minutes to 30 hours.

Reaction scheme (4) shows a reaction wherein 4-benzoyl-5-hydroxypyrazole is converted to a 5-chloro compound by a chlorinating agent, followed by condensation with a suitable alcohol or acid.

As the chlorinating agent, phosphorus oxychloride, phosphorus pentachloride or thionyl chloride may be mentioned.

As the solvent, a wide range of solvents inert to the reaction, such as dimethylformamide, may be employed. However, the reaction can be conducted without any solvent.

The reaction temperature is preferably from 30 to 150°C, and the reaction time is usually from 30 minutes to 10 hours. In some cases, the reaction time may be shortened or the yield may be improved by an addition of a dehydrohalogenating agent.

The condensation reaction with an alcohol or acid is conducted by an addition of a dehydrohalogenating agent.

As such a dehydrohalogenating agent, a base such as sodium hydroxide, potassium hydroxide, sodium carbonate, potassium carbonate, sodium alkoxide or sodium hydride may be employed.

-The solvent may be any solvent which is inert to the reaction (such as an aromatic hydrocarbon, an ether, a ketone or N,N'-dimethylformamide). The reaction temperature may be selected within a range of from room temperature to the boiling point of the solvent.

The benzoic acids or benzoyl chlorides used as the starting materials for the compounds of the present invention may readily be prepared by a proper combination of various known syntheses. For instance, compounds wherein the substituent Z in the benzene ring is $-S(O)_nCH_3$ can be prepared in accordance with the following reaction schemes.

40

30

50

45

In the above formulas, X, Y, V and W are as defined above, and Hal is a halogen atom.

Now, the preparation of benzoic acids will be described in detail with reference to Reference Examples. However, it should be understood that the present invention is by no means restricted by such specific Examples.

REFERENCE EXAMPLE 1

50 Preparation of 4-methanesulfonyl-3-methoxymethyl-2-methyl benzoic acid and 3-methoxymethyl-2-methyl-4-methylthio benzoic acid

(1) 2-Methyl-3-nitrobenzyl alcohol

39.0 g (0.2 mol) of methyl 2-methyl-3-nitrobenzoate was dissolved in 600 ml of tert-butanol, and 19.0 g of sodium borohydride was added thereto. Under refluxing, 150 ml of methanol was dropwise added thereto over a period of 1 hour. The refluxing was continued further for 1 hour to complete the reaction. The

reaction mixture was left to cool, and then water was added thereto. The solvent was distilled off under reduced pressure. To the residue, water and chloroform were added, and the organic layer was separated and dried over anhydrous sodium sulfate. Then, the solvent was distilled off to obtain 30.7 g of 2-methyl-3-nitrobenzyl alcohol.

(2) 2-Methyl-3-nitrobenzyl methyl ether

30.1 g (0.18 mol) of 2-methyl-3-nitrobenzyl alcohol obtained in the preceding step was dissolved in 200 ml of benzene, and 0.2 g of tetra-n-butylammonium bromide and a 50% aqueous solution of 20.1 g of sodium hydroxide were added thereto sequentially. Then, 27.2 g of dimethyl sulfate was dropwise added the retorat room temperature. Further, the reaction was conducted for 3 hours under stirring. Water was added to the reaction solution, and the organic layer was separated and washed sequentially with water, a 2% hydrochloric acid aqueous solution, water and a saturated sodium chloride aqueous solution. Then, the solvent was distilled off to obtain 30.9 g of 2-methyl-3-nitrobenzyl methyl ether as an oily substance.

(3) 3-Methoxymethyl-2-methylaniline

To 30.7 g (0.17 mol) of the above-mentioned 2-methyl-3-nitrobenzyl methyl ether, 200 ml of methanol was added. After the compound was dissolved in methanol, 92 ml of concentrated hydrochloric acid was gradually added thereto. Then, 30.4 g of iron powder was gradually added so that the reaction temperature became at a level of not higher than 60°C, and the reaction was continued further for 1 hour.

To the reaction solution, 300 ml of water was added, and sodium hydroxide was added until the pH became higher than 8. To the slurry thus obtained, chloroform was added, and the mixture was thoroughly stirred. Then, the solid was separated by filtration, and an organic layer was separated from the filtrate.

This organic layer was washed sequentially with water and a saturated sodium chloride aqueous solution and then dried over anhydrous sodium sulfate. Further, the solvent was distilled off under reduced pressure to obtain 23.1 g of 3-methoxymethyl-2-methylaniline as an oily substance.

(4) 3-Methoxymethyl-2-methyl-4-thiocyanoaniline

22.6 g (0.15 mol) of 3-methoxymethyl-2-methylaniline was dissolved in 300 ml of methanol. Then, 36.5 g of sodium thiocyanate was added thereto to obtain a uniform solution. This solution was cooled to 0°C, and 100 ml of a saturated methanol solution of sodium bromide with 25.2 g of bromine was dropwise added thereto so that the reaction temperature did not exceed 5°C. After the dropwise addition, the mixture was stirred at a temperature of not higher than 5°C for 1 hour and at room temperature for 1 hour to complete the reaction. The reaction solution was poured into 1 liter of water and neutralized with a 5% sodium carbonate aqueous solution. Chloroform was added to extract the oily substance. The chloroform layer was washed with water and a saturated sodium chloride aqueous solution and dried over anhydrous sodium sulfate. Then, the solvent was distilled off under reduced pressure to obtain 29.6 g of the desired product.

(5) 3-Methoxymethyl-2-methyl-4-methylthioaniline

29.1 g (0.14 mol) of 3-methoxymethyl-2-methyl-4-thiocyanoaniline was dissolved in 200 ml of ethanol and mixed with 100 ml of an aqueous solution containing 33.6 g of sodium sulfide nonahydrate at room temperature. Then, 21.9 g of methyl iodide was dropwise added thereto, and the mixture was reacted at room temperature for 3 hours. After completion of the reaction, the solvent was distilled off under reduced pressure, and water and chloroform were added to the residue. Then, the organic layer was separated and washed sequentially with water and a saturated sodium chloride aqueous solution and then dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure to obtain 25.6 g of the desired product as an oily substance.

55

20

30

(6) 3'-lodo-2'-methyl-6'-methylthiobenzyl methyl ether

To 25.6 g (0.13 mol) of 3-methoxymethyl-2-methyl-4-methylthioaniline, 100 ml of water and 33 ml of concentrated hydrochloric acid were added to convert it to an aniline hydrochloride. This solution was cooled to 0°C, and 30 ml of an aqueous solution containing 9.3 g of sodium nitrite was dropwise added thereto so that the reaction temperature did not exceed 5°C. After completion of dropwise addition, stirring was continued further for 30 minutes to complete diazotization. 100 ml of an aqueous solution containing 33 g of potassium iodide was heated to 70°C, and the aqueous solution of the diazonium salt obtained above was gradually added thereto and decomposed. The reaction solution was stirred further for 1 hour at 70°C and then left to cool. The oil component was extracted with benzene. The benzene layer was washed sequentially with water, a saturated sodium hydrogensulfite aqueous solution, water and a saturated sodium chloride aqueous solution. Then, the solvent was distilled off under reduced pressure, and the residue was purified by column chromatography (eluent: benzene) to obtain 30.0 g of the desired product. Melting point: 56.0 - 59.0°C.

15

(7) 3-Methoxymethyl-2-methyl-4-methylthiobenzoic acid

27.7 g (0.09 mol) of 3'-iodo-2'-methyl-6'-methylthiobenzyl methyl ether was dissolved in 100 ml of dried tetrahydrofuran, and 63 ml of a 1.5 M n-butyllithium n-hexane solution was dropwise added thereto at -70°C. After the dropwise addition, the mixture was stirred for 15 minutes at the same temperature, and then dried carbon dioxide gas was thoroughly blown into the reaction solution until the heat generation of the reaction solution stopped. After the reaction, the temperature of the solution was returned to room temperature, and water and diethyl ether were added for liquid separation. The aqueous layer thus obtained was further washed twice with diethyl ether, and then concentrated hydrochloric acid was added to bring the pH<1. Precipitated crystals were collected by filtration, thoroughly washed with water and dried to obtain 14.4 g of the desired product. Melting point: 192.0 - 194.0°C

0 (8) 4-Methanesulfonyl-3-methoxymethyl-2-methylbenzoic acid

To 11.3 g (0.05 mol) of 3-methoxymethyl-2-methyl-4-methylthiobenzoic acid, 120 ml of acetic acid and 120 ml of a 35% hydrogen peroxide aqueous solution were added, and the mixture was reacted at 80°C for 1 hour. After cooling, the reaction solution was poured into ice water, whereupon precipitated crystals were collected by filtration, then washed with water and dried to obtain 12.3 g of the desired product. Melting point: 129.0 - 131.0°C.

REFERENCE EXAMPLE 2

40

Preparation of 3-methoxycarbonyl-2-methyl-4-methylthiobenzoic acid and 4-methanesulfonyl-3-methoxycarbonyl-2-methylbenzoic acid

(1) Methyl 3-amino-2-methylbenzoate

45

40 g of methyl 2-methyl-3-nitrobenzoate was dissolved in 120 ml of methanol, and 157 g of concentrated hydrochloric acid was added thereto. Then, 36.8 g of iron powder was gradually added while maintaining the mixture at a temperature of not higher than 60°C. The mixture was stirred at room temperature for 4 hours and then poured into 1 liter of ice water. The solution was neutralized with sodium carbonate and extracted with chloroform (after filtering off insolubles). The extract was washed with a saturated sodium chloride aqueous solution and dried over anhydrous sodium sulfate. Then, the solvent was distilled off to obtain 27.8 g of the desired product as an oily substance.

(2) Methyl 3-amino-2-methyl-6-thiocyanobenzoate

While maintaining a solution comprising 27.7 g of methyl 3-amino-2-methylbenzoate, 41.5 g of sodium thiocyanate and 250 mt of methanol at a temperature of not higher than 0°C, 100 mt of sodium bromide-saturated methanol with 28.1 g of bromine was slowly dropwise added thereto. The mixture was stirred at room temperature for 3 hours and then poured into 1 liter of ice water. The solution was neutralized with sodium carbonate and then extracted with chloroform. The extract was washed with a saturated sodium chloride aqueous solution and dried over anhydrous sodium sulfate. Then, the solvent was distilled off to obtain 34.0 g of the desired product as an oily substance.

(3) Methyl 3-amino-2-methyl-6-methylthiobenzoate

10

25

40

50

To a solution comprising 39.5 g of sodium sulfide nonahydrate and 110 ml of water, a solution comprising 32.9 g of methyl 3-amino-2-methyl-6-thiocyanobenzoate and 300 ml of ethanol was dropwise added. The mixture was stirred at room temperature for 1.5 hours, and 24.0 g of methyl iodide was dropwise added under cooling with ice. The mixture was stirred further at room temperature for 2 hours and then concentrated under reduced pressure. A saturated sodium chloride aqueous solution was added thereto, and the mixture was extracted with chloroform. The extract was dried over anhydrous sodium sulfate. Then, the solvent was distilled off to obtain 30.1 g of the desired product as an oily substance.

(4) Methyl 3-iodo-2-methyl-6-methylthiobenzoate

28 g of methyl 3-amino-2-methyl-6-methylthiobenzoate was stirred in 150 ml of concentrated hydrochloric acid at room temperature for 2 hours to convert it to a hydrochloride. Then, while maintaining the mixture at a temperature of not higher than 0°C, a solution comprising 11.9 g of sodium nitrite and 20 ml of water was dropwise added thereto to obtain a diazonium salt solution. The diazonium salt solution was dropwise added to a solution comprising 28.4 g of potassium iodide and 90 ml of water while maintaining th solution at 80°C. After completion of the dropwise addition, the mixture was stirred at 80°C for 15 minutes and left to cool. Water was added thereto, and the mixture was extracted with chloroform. The extract was washed with an aqueous sodium hydrogensulfite solution and water and then dried over anhydrous sodium sulfate. The solvent was distilled off to obtain 40 g of the desired product as a crude product. The crude product was purified by silica gel column chromatography (eluted with benzene) to obtain 36.0 g of a purified product as an oily substance.

(5) 3-Methoxycarbonyl-2-methyl-4-methylthiobenzoic acid

While maintaining a solution comprising 20.0 g of methyl 3-iodo-2-methyl-6-methylthiobenzoate and 70 ml of dried tetrahydrofuran at a temperature of not higher than -60°C under a nitrogen atmosphere, 42 ml of a 1.5 M n-butyllithium n-hexane solution was dropwise added thereto. Fifteen minutes later, dried carbon dioxide gas was thoroughly blown into the mixture while maintaining it at a temperature of not higher than -50°C. After purging carbon dioxide gas with nitrogen, 12.7 g of diisopropylamine was dropwise added th reto, and the mixture was stirred until the temperature reached room temperature. The mixture was concentrated under reduced pressure. Water was added thereto and the mixture was washed with chloroform. The aqueous solution was acidified with concentrated hydrochloric acid and then extracted with chloroform. The extract was dried over anhydrous sodium sulfate. The solvent was distilled off to obtain 7.5 g of the desired product. Melting point: 178 - 178.5°C.

(6) 4-Methanesulfonyl-3-methoxycarbonyl-2-methylbenzoic acid

A solution comprising 5.0 g of 3-methoxycarbonyl-2-methyl-4-methylthiobenzoic acid, 25 ml of acetic acid and 25 ml of hydrogen peroxide (35%) was stirred at .80°C for 3 hours. After cooling, the mixture was poured into ice water and extracted with chloroform. The extract was dried over anhydrous sodium sulfate. Then, the solvent was distilled off to obtain 5.1 g of the desired product. Melting point: 151 - 152°C

REFERENCE EXAMPLE 3

Preparation of 2-chloro-3-ethylthiomethyl-4-methanesulfonylbenzoic acid

(1) Methyl 3-bromomethyl-2-chloro-4-methanesulfonylbenzoate

12.1 g of methyl 2-chloro-4-methanesulfonyl-3-methylbenzoate was dissolved in 250 ml of carbon tetrachloride, and the solution was refluxed under stirring. Then, 7.5 g of bromine and 1 g of benzoyl peroxide were gradually added thereto over a period of 30 minutes, and the solution was further refluxed for 4 hours under heating. After cooling, 200 ml of chloroform was added thereto, and the mixture was washed with a 5% sodium hydrogensulfite aqueous solution. The organic layer was separated and dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure to obtain a crude product. The crude product was washed with ethyl ether to obtain 13.2 g of crystals of the desired product. Melting point: 77 - 78°C

15

(2) Methyl 2-chloro-3-ethylthiomethyl-4-methanesulfonylbenzoate

To 100 ml of tetrahydrofuran, 1.3 g of ethanethiol and 1.5 g of potassium carbonate and then 4.4 g of methyl 3-bromomethyl-2-chloro-4-methanesulfonylbenzoate were added, and the mixture was stirred for 1 day at room temperature. Then, the mixture was stirred further for 1 hour at a temperature of from 50 to 60°C. After cooling, chloroform was added thereto, and the mixture was washed with a dilute potassium carbonate aqueous solution. The chloroform layer was separated and dried. Then, the solvent was distilled off to obtain 4.1 g of methyl 2-chloro-3-ethylthiomethyl-4-methanesulfonylbenzoate as an oily substance.

25

(3) 2-Chloro-3-ethylthiomethyl-4-methanesulfonylbenzoic acid

To a solution mixture comprising 50 ml of a 10% sodium hydroxide aqueous solution and 150 ml of methanol, 3.9 g of methyl 2-chloro-3-ethylthiomethyl-4-methanesulfonylbenzoate was added, and the mixture was stirred at room temperature for 30 minutes. Methanol was distilled off under reduced pressure, and a dilute hydrochloric acid was added to the residue for acid precipitation. The mixture was extracted with ethyl acetate, and the extract was dried. Then, the solvent was distilled off to obtain 3.5 g of the desired product. Melting point: 172 - 174°C.

35

REFERENCE EXAMPLE 4

Preparation of 2-chloro-4-methanesulfonyl-3-methoxymethylbenzoic acid

40

(1) Methyl 2-chloro-4-methanesulfonyl-3-methoxymethylbenzoate

To a solution comprising 12.0 g of methyl 3-bromomethyl-2-chloro-4-methanesulfonylbenzoate prepared in Reference Example 3(1) and 100 ml of methanol, 50 ml of a methanol solution containing 1.7 g of sodium methoxide was added, and the mixture was stirred at room temperature overnight. The solvent was distilled off under reduced pressure. Then, dilute hydrochloric acid was added to the residue, and the mixture was extracted with chloroform. The extract was washed with water and dried over anhydrous sodium sulfate. Then, the solvent was distilled off to obtain 9.5 g of the desired product as a crude product. The crude product was purified by silica gel column chromatography (eluted with benzene) to obtain 7.5 g of a purified product as an oily substance.

(2) 2-Chloro-4-methanesulfonyl-3-methoxymethylbenzoic acid

To a solution comprising 3.0 g of methyl 2-chloro-4-methanesulfonyl-3-methoxymethylbenzoate and 20 ml of methanol, a solution comprising 0.57 g of sodium hydroxide (93%) and 2 ml of water was added, and the mixture was stirred at room temperature for 30 minutes. After an addition of 10 ml of water, the mixture was concentrated under reduced pressure. Then, dilute hydrochloric acid was added thereto, and the mixture was extracted with chloroform. The extract was dried over anhydrous sodium sulfate. Then, the solvent was distilled off to obtain 2.6 g of the desired product. Melting point: 137 - 141°C.

10

REFERENCE EXAMPLE 5

<u>Preparation</u> of <u>2-chloro-4-methanesulfonyl-3-methoxymethylbenzoic</u> acid (alternative method of <u>Reference</u> Example 4)

15

The desired product was prepared in the same manner as in Reference Example 1. Melting point: 137 - 141 °C

The physical properties of the intermediates were as follows:

- (1) 2-Chloro-3-nitrobenzyl alcohol: Oily substance
- (2) 2'-Chloro-3'-nitrobenzyl methyl ether: Oily substance
- (3) 2-Chloro-3-methoxymethylaniline: Oily substance
- (4) 2-Chloro-3-methoxymethyl-4-thiocyanoaniline: Melting point: 90 96°C
- (5) 2-Chloro-3-methoxymethyl-4-methylthioaniline: Oily substance
- (6)2'-Chloro-3'-iodo-6'-methylthiobenzyl methyl ether: Melting point: 53 56°C

25

20

REFERENCE EXAMPLE 6

Preparation of 2-chloro-4-methanesulfonyl-3-methoxycarbonyl benzoic acid

30

35

The desired product was prepared in the same manner as in Reference Example 2. Melting point 160 - 162°C

The physical properties of the intermediates were as follows:

- (1) Methyl 3-amino-2-chlorobenzoate: Oily substance
- (2) Methyl 3-amino-2-chloro-6-thiocyanobenzoate: Melting point: 80 83°C
- (3) Methyl 3-amino-2-chloro-6-methylthiobenzoate: Melting point: 70 72°C
- (4) Methyl 2-chloro-3-iodo-6-methylthiobenzoate: Oily substance
- (5) 2-Chloro-3-methoxycarbonyl-4-methylthiobenzoic acid: Melting point: 176 179°C

40

50

REFERENCE EXAMPLE 7

Preparation of 4-methanesulfonyl-3-[(2-methoxyethyl)oxycarbonyl]-2-methylbenzoic acid

The desired compound was prepared in the same manner as in Reference Example 2. Melting point: . 118 - 121 °C

The physical properties of the intermediates were as follows:

- (1) 2-Methoxyethyl 3-amino-2-methylbenzoate: Oily substance
- (2) 2-Methoxyethyl 3-amino-2-methyl-6-thiocyanobenzoate: Melting point: 79 81 °C
- (3) 2-Methoxyethyl 3-amino-2-methyl-6-methylthiobenzoate: Oily substance
- (4) 2-Methoxyethyl 3-iodo-2-methyl-6-methylthiobenzoate: Oily substance
- (5) 3-[(2-methoxyethyl)oxycarbonyl]-2-methyl-4-methylthiobenzoic acid: Melting point: 90 93°C

55 REFERENCE EXAMPLE 8

<u>Preparation of 2-m thyl-4-methylthio-3-n-propoxycarbonylbenzoic acid and 4-methanesulfonyl-2-methyl-3-n-propoxycarbonylbenzoic acid</u>

(1) Methyl 3-bromo-2-methyl-6-methylthiobenzoate

16.1 g of the compound of Reference Example 2(3) was stirred in 150 ml of hydrobromic acid (48%) to convert it into a hydrobromide. While maintaining the solution at a temperature of not higher than 0°C, a solution comprising 7.2 g of sodium nitrite and 20 ml of water was dropwise added to obtain a diazonium salt solution. The diazonium salt solution was dropwise added to a solution comprising 6.0 g of cuprous bromide and 7.7 g of hydrobromic acid (48%) while refluxing the solution under heating. After completion of the dropwise addition, the mixture was further refluxed for 1 hour under heating and then left to cool. Ice water was added thereto, and the mixture was extracted with chloroform. The extract was washed with an aqueous sodium hydrogensulfite solution and water and then dried over anhydrous sodium sulfat. The solvent was distilled off to obtain 19.2 g of the desired product as a crude product. The crude product was purified by silica gel column chromatography (eluted with benzene) to obtain 17.1 g of a purified product as an oily substance.

15

(2) 3-Bromo-2-methyl-6-methylthiobenzoic acid

To 100 ml of an ethanol solution containing 17.0 g of methyl 3-bromo-2-methyl-6-methylthiobenzoate, 16 g of a 50% sodium hydroxide aqueous solution was added, and the mixture was refluxed for 3 hours under heating. The reaction mixture was concentrated under reduced pressure. Then, water was added thereto, and the mixture was washed with chloroform. The aqueous layer was acidified with concentrated hydrochloric acid and extracted with chloroform. The extract was dried over anhydrous sodium sulfate. The solvent was distilled off to obtain 15.9 g of the desired product. Melting point: 98 - 103°C

25

(3) n-Propyl 3-bromo-2-methyl-6-methylthiobenzoate

Thionyl chloride was added to 15.8 g of 3-bromo-2-methyl-6-methylthiobenzoic acid, and the mixture was refluxed for 4 hours under heating. Thionyl chloride was distilled off, and 70 ml of n-propanol was added to the residue under cooling with ice. Then, a solution comprising 7.3 g of pyridine and 20 ml of n-propanol was dropwise added thereto. The mixture was stirred at room temperature overnight and then concentrated under reduced pressure. Then, ethyl acetate was added thereto, and the mixture was washed sequentially with a 5% sodium carbonate aqueous solution, 10% hydrochloric acid and water and then dried over anhydrous sodium sulfate. Then, the solvent was distilled off under reduced pressure to obtain 18 g of the desired product as a crude product. The crude product was purified by silica gel column chromatography (eluted with benzene) to obtain 16.6 g of a purified product as an oily substance.

--

(4) 3-Bromo-2-methyl-6-methylthiobenzoic acid

This product was prepared in the same manner as in Reference Example 2(5). Melting point: 138 - 142°C

(5) 3-Bromo-6-methanesulfonyl-2-methylbenzoic acid

This compound was prepared in the same manner as in Reference Example 2(6). Melting point: 142 - 146°C

50

55

REFERENCE EXAMPLE 9

Preparation of 2-chloro-3-isopropoxycarbonyl-4-methanesulfonylbenzoic acid

This compound was prepared from the compound of Reference Example 6(4) in the same manner as in Reference Example 8(2)-(5). Melting point: 146 - 148°C

The physical properties of the intermediates were as follows:

(1) 2-Chloro-3-iodo-6-methylthiobenzoic acid: Melting point: 155 - 159°C

- (2) Isopropyl 2-chloro-3-iodo-6-methylthiobenzoate: Oily substance
- (3) 2-Chloro-3-isopropoxycarbonyl-4-methylthiobenzoic acid: Melting point: 114 118°C

5 REFERENCE EXAMPLE 10

<u>Preparation of 3-(1-methoxyethyl)-2-methyl-4-methylthiobenzoic acid and 4-methanesulfonyl-3-(1-methoxyethyl)-2-methylbenzoic acid</u>

a (1) 2'-Methyl-3'-nitroacetophenone

To 5.4 g of metal magnesium, 5 ml of absolute ethanol and 0.5 ml of carbon tetrachloride were dropwise added under a dry nitrogen stream. Further, 130 ml of dried diethyl ether was added under refluxing, and then a solution comprising 25 ml of a diethyl ether, 35.2 g of diethyl malonate and 20 ml of ethanol was dropwise added at a rate to maintain the refluxing. After completion of the dropwise addition, refluxing was continued for 3 hours to prepare diethyl ethoxymagnesiomalonate. To the solution of diethyl ethoxymagnesiomalonate thus obtained, 150 ml of a diethyl ether solution of 40.0 g of 2-methyl-3nitrobenzoic acid chloride prepared from 2-methyl-3-nitrobenzoic acid and thionyl chloride, was dropwise added over a period of 20 minutes under refluxing, and the reaction was continued for 2 hours. After cooling, dilute sulfuric acid was added thereto for hydrolysis. The diethyl ether layer was washed sequentially with water and a saturated sodium chloride aqueous solution. Then, the solvent was distilled off under reduced pressure, and the residue was dried to obtain a crude product of diethyl 2-(2-methyl-3nitrobenzoyl)malonate. To this crude product, a mixture comprising 7.5 ml of concentrated sulfuric acid, 60 ml of acetic acid and 40 ml of water was added, and the mixture was refluxed for 6 hours under heating. Then, the mixture was adjusted to pH 10 with a 20% sodium hydroxide aqueous solution. Precipitated oil component was extracted with chloroform. This chloroform layer was washed sequentially with water and a sodium chloride aqueous solution. Then, the solvent was distilled off under reduced pressure to obtain 34.0 g of the desired product. (Yield: 95%) Melting point: 53.0 - 54.0°C

(2) Preparation of 1-methyl-2'-methyl-3'-nitrobenzyl alcohol

To 50 ml of a methanol solution of 0.5 g of sodium hydroxide, 0.9 g of sodium borohydride was added at 0°C, and then 100 ml of a methanol solution of 14.3 g of 2'-methyl-3'-nitroacetophenone was dropwise added thereto. The temperature of the mixture was returned to room temperature and reacted for 1 hour. After the reaction, the reaction mixture was poured into water and extracted with benzene. The subsequent operation was conducted in a usual manner to obtain 14.3 g of the desired product as an oily substance. (Yield: 99%)

Subsequently, the synthesis was conducted in the same manner as in Reference Example 1 to obtain intermediates (3) to (9).

- (3) 1-Methyl-2'-methyl-3'-nitrobenzyl methyl ether: Oily substance
- (4) 1-Methyl-3'-amino-2'-methylbenzyl methyl ether: Oily substance
- (5) 1-Methyl-3'-amino-2'-methyl-6'-thiocyanobenzyl methyl ether: Solid
- (6) 1-Methyl-3'-amino-2'-methyl-6'-methylthiobenzyl methyl ether: Oily substance
- (7) 1-Methyl-3'-iodo-2'-methyl-6'-methylthiobenzyl: Oily substance
- (8) 3-(1-Methoxyethyl)-2-methyl-4-methylthiobenzoic acid: Oily substance
- (9) 4-Methanesulfonyl-3-(1-methoxyethyl)-2-methylbenzoic acid: Melting point: 106 109°C

50 REFERENCE EXAMPLE 11

Preparation of 2,4-dichloro-3-methoxycarbonylbenzoic acid

(1) 2,4-dichloro-3-nitrobenzoic acid

To a solution of 25 ml of fuming nitric acid and 20 ml of sulfuric acid, 25 g of 2,4-dichlorobenzoic acid was gradually added. After completion of the heat generation, the reaction mixture was poured into ice water. Precipitated solid was washed with wat r and dried to obtain 23.0 g of the desired product.

30

45

(2) Methyl 2,4-dichloro-3-nitrobenzoate

23.0 g of 2,4-dichloro-3-nitrobenzoic acid and 150 ml of thionyl chloride were refluxed for 6 hours under heating. Then, thionyl chloride was distilled off to obtain crude 2,4-dichloro-3-nitrobenzoyl chloride. 200 ml of methanol was added to the crude compound and refluxed under heating. Methanol was distilled off, and then ethyl acetate was added thereto to obtain an ethyl acetate solution. The solution was washed sequentially with a 5% sodium hydroxide aqueous solution, diluted hydrochloric acid and water. After drying, the solvent was distilled off to obtain 21.8 g of the desired product. Melting point: 72-74°C.

Subsequently, the synthesis was conducted in the same manner as in Reference Example 1 to obtain intermediates (3) and (4), and the desired product (5).

- (3) Methyl 3-amino-2,4-dichlorobenzoate: Oily substance
- (4) Methyl 2,4-dichloro-3-iodobenzoate: Oily substance
- (5) 2,4-dichloro-3-methoxycarbonylbenzoic acid: Melting point: 183-185°C

REFERENCE EXAMPLE 12

Preparation of 2-chloro-3-cyanomethyl-4-methanesulfonyl benzoic acid

20 (1) Methyl 2-chloro-3-cyanomethyl-4-methanesulfonylbenzoate

5.0 g of methyl 3-bromomethyl-2-chloro-4-methanesulfonylbenzoate was added to a solution of 0.4 g of 18-crown-6 and 1.9 g of potassium cyanide in 50 ml of acetonitrile. The mixture was stirred for 72 hours at room temperature. After filtering off the solid, water was added to the filtrate, and the mixture was extracted with chloroform. After washing the extract with water and drying it, the solvent was distilled off to obtain a crude product. The crude product was purified by short silica gel column chlomatography (eluent: chloroform) to obtain 4.1 g of the desired product. Melting point: 151-155°C.

30 (2) 2-chloro-3-cyanomethyl-4-methanesulfonylbenzoic acid

To 4.0 g of methyl 2-chloro-3-cyanomethyl-4-methanesulfonylbenzoate and 50 ml of methanol, 5 ml of an aqueous solution containing 0.72 g of sodium hydroxide (93%) was gradually added. The mixture was stirred for 15 minutes at room temperature. Then, the reaction mixture was neutralized with diluted hydrochloric acid, methanol was distilled off under reduced pressure and the concentrated solution was extracted with chloroform. After washing the extract with water and drying it, chloroform was distilled off to obtain 0.9 g of the desired product. Melting point: 169-172°C

40 REFERENCE EXAMPLE 13

Preparation of 3-acetoxymethyl-2-chloro-4-methanesulfonyl benzoic acid

(1) Methyl 3-acetoxymethyl-2-chloro-4-methanesulfonylbenzoate

50 ml of a DMF solution containing 5.0 g of methyl 3-bromomethyl-2-chloro-4-methanesulfonylbenzoate and 1.2 g of sodium acetate, was stirred for 2 hours at 100°C. After cooling, the reaction mixture was poured into ice water and extracted with chloroform. After washing the extract with water and drying it, the solvent was distilled off to obtain 4.2 g of the desired product. Melting point: 165-168°C

55

50

(2) 2-chloro-3-hydroxymethyl-4-methanesulfonylbenzoic acid

6 ml of an aqueous solution containing 1.3 g of sodium hydroxide (93%), was added to 3.9 g of methyl 3-acetoxymethyl-2-chloro-4-methanesulfonylbenzoate and 100 ml of methanol. The mixture was stirred for 30 minutes at room temperature. 50 ml of water was added thereto, and methanol was distilled off under reduced pressure. Then, the reaction mixture was acidified with hydrochloric acid and extracted with chloroform. The extract was concentrated to dryness to obtain 1.3 g of the desired product. Melting point: 240-245°C.

(3) 3-acetoxymethyl-2-chloro-4-methanesulfonylbenzoic acid

1.3 g of 2-chloro-3-hydroxymethyl-4-methanesulfonyl benzoic acid and 30 ml of acetic anhydride, was refluxed for 3 hours under heating. The reaction mixture was concentrated under reduced pressure. Then, 50 ml of water was added thereto and warmed for 1 hour. Precipitated solid was collected by filtration, washed with water and dried to obtain 1.35 g of the desired product. Melting point: 219-223°C.

REFERENCE EXAMPLE 14

10

20

25

30

35

40

45

50

55

Preparation of 2,4-dichloro-3-methoxymethylbenzoic acid

This compound was prepared in the same manner as in Reference Examples 3(1) and 4. Melting point: 130-136°C.

The physical properties of the intermediates were as follows:

- (1) Methyl 3-bromomethyl-2,4-dichlorobenzoate: Melting point: 55-58°C
- (2) Methyl 2,4-dichloro-3-methoxymethylbenzoate: Oily substance

The physical properties of benzoic acids prepared in accordance with the preceding Reference Examples will be given in Tables 1 and 2 including those of the preceding Reference Examples.

Table 1

HOOC X Z

10	. X.	Y	Z	Melting point (°C)
	lle	CH₂OMe	SMe	192~194
15	Ме	CH ₂ OMe	S0 _z Me	129~131
	Me	CO ₂ Me	SMe	178~178.5
20	Me	CO ₂ Me	SOzMe	151~152
	Иe	CH zOE t	SMe	172~175
	Me	CH zOE t	S0 _z Me	160~162
25	C L	CO _z Me	C L	183 ~ 185
	Ме	CHMeOMe	Sile	Oily substance
30	Иe	CHMeOMe	S0₂Me	106~109
	Йe	CO ₂ Pr-i	SMe	151~153
35	Иe	CO _z Pr-i	S0 _z Me	153~155
	C L	CH _z OMe	SOzMe	137~141
	Ме	CH z OPr-i	SMe	134~138
40	Me	CH 2 OPr - i	SOzMe	159~161

45

50

0 282 944

Table 1 (continued)

5	
·	

X	Y	Z	Melting point (°C)
Ме	COzCHzCHzOMe	SMe	90~93
Йe	CO ₂ CH ₂ CH ₂ OMe	S0 _z Me	118~121
C L	CH ₂ SE t	S0 _z Me	172~174
Ме	COzEt	SMe	114~120
Иe	CO _z E t	S0 _z Me	119.7~127.9
C &	CH 20CH 2CH 20Me	S0 ₂ Me	93 ~ 95
C L	CH ₂ N	S0 _z Me	Oily substance
Иe	C0 2	Sile	169~172
Мe	C0 2	S0 ₂ Me	129~134
Ме	CO _z Pr-n	SMe	138~142
Ме	CO ₂ Pr-n	SOzNe	142~146
C L	CH z OH	S0 _z Me	240~245
_ C &	C0 ₂ Ne	SMe .	176~179
C L	C0 _z Me	SOzNe	160~162
C &	CO _z Pr-i	SMe	114~118
	Me CL Me CL Me Me CL CL CL CL CL CL	Me CO2CH2CH2OMe Me CO2CH2CH2OMe CL CH2SEt Me CO2Et CL CH2OCH2CH2OMe CL CH2N Me CO2 Me CO2PT-n Me CO2PT-n CL CH2OH CL CH2OH CO2Me CL CO2Me	Me CO2CH2CH2OMe SMe Me CO2CH2CH2OMe SO2Me C L CH2SEt SO2Me Me CO2Et SMe Me CO2Et SO2Me C L CH2OCH2CH2OMe SO2Me C L CH2N SO2Me Me CO2 SMe Me CO2PT-n SMe Me CO2PT-n SO2Me C L CH2OH SO2Me C L CH2OH SO2Me C L CH2OH SO2Me Me CO2PT-n SO2Me C L CH2OH SO2Me C L CH2OH SO2Me C L CO2Me SMe C L CO2Me SO2Me

0 282 944

Table 1 (continued)

5	

		•		
	Х	Y	Z	Melting point (°C)
10				
	C L	CO ₂ Pr-i	S0 ₂ Me	146~148
	0Me	COzMe	She	107~109
15	0Me	C0 _z Me	SOzMe	113~119
	Ме	CHE tOMe	SMe	Oily substance
20	Me	CHE tOMe	SOzMe	Oily substance
	Ме	CHMeOEt	SMe	Oily substance
25	Me	CHMeOEt	SOzMe	Oily substance
20	C L	$CH_2OCH_2C \equiv CH$	SOzMe	166~169
	C &	CH ₂ OCH ₂ CH=CH ₂	SOzMe	118~119
30	C &	CH ₂ OAm-n	SOzMe	Oily substance
	Иe	CO ₂ Am-i	SMe	98~105
35	Иe	CO ₂ Am-i	SOzMe	107~113
	C L	CH ₂ OCH ₂ CF ₃	S0 ₂ Me	155 ~157
	0Me	CH _z OMe	SMe	157~161
40 ·	0Me	CH _z OMe	SOzMe	Oily substance
	Ме	CO ₂ CH ₂ CH ₂ C &	SMe	138~144
15 _				

0 282 944

Table 1 (continued)

				•
	X	. У	Z	Melting point (°C)
10	Ме	CO ₂ CH ₂ CH ₂ C L	S0 _z Me	121~126
	C &	CH 2 CN	S0 ₂ Me	169 ~172
15	C L	CH 2 OAc	SOzMe	219 ~223
	C &	CH ₂ OMe	C L	130~136
	C L	COzEt	SOzMe	156 ~159
20	C L	CH=CHOMe (trans)	SOzne	146 ~149
25	· C.L -	CON(Et) _z	SOzMe	196 ~201

Table 2

				-
	<u> </u>	Y	Z .	'H-NMR (δ, ppm) [Solvent]
10	Me	CHEtOMe	S0 _z Me	1.19(3H,t), 1.63(3H,d),
		•		2.78(3H,s), 3.18(3H,s),
15				3.35(2H,q), 5.63(1H,q),
				7.81(2H, A-B q), 10.20(1H,s)
20			-	[CDC 2 3]
	Ме	CHMe0Et	SMe	1.00(3H,t), 1.67~2.26(2H,m),
25				2.46(3H,s), 2.69(3H,s),
				3.21(3H,s), 4.91(1H,d-d)
30			-	7.48(2H, A-Bq), 10.2(1H,s)
				[CDC & z]
35	 Ме	CHMeOEt	50 V-	1 04/00 4) 1 00 0 00/00)
	116	Chnedit	SO₂Me	1.04(3H, t), 1.60~2.20(2H, m),
40				2.66(3H,s), 3.23(6H,s),
				5.26(1H,d-d), 7.79(2H, A-B q)
				9.0(1H, Broad s)
45				[CDC L 3 + DMSO-d.]
	0Me	CH₂OMe	SOzMe	3.04(3H,s), $3.24(3H,s)$,
50				3.71(3H,s), $4.71(2H,s)$,
				7.71(2H,s), 8.88(1H,Broad s)
				[CDC & s + DMSO-d.]
55				

These benzoic acids can readily be led to benzoyl chlorides by chlorinating agents such as phosphorus pentachloride, thionyl chloride and sulfuryl chloride.

By using such benzoic acids or benzoyl chlorides, compounds of the present invention can be readily prepared in accordance with reaction schemes (1) to (4).

The present invention will be described in further detail with reference to Examples. However, it should be understood that the present invention is by no means restricted to such specific Examples.

10 EXAMPLE 1

Preparation of 1-ethyl-5-hydroxy-4-(4-methanesulfonyl-3-methoxymethyl-2-methylbenzoyl)pyrazole

1.12 g (0.01 mol) of 1-ethyl-5-hydroxypyrazole is dissolved in 30 ml of t-amyl alcohol, and then 2.59 g (0.01 mol) of 4-methanesulfonyl-3-methoxymethyl-2-methylbenzoic acid, 2.06 g (0.01 mol) of N,N'-dicyclohexylcarbodiimide and 0.69 g (0.005 mol) of anhydrous potassium carbonate were sequentially added thereto. The mixture was reacted at a temperature of from 80 to 90°C for 8 hours under stirring. After completion of the reaction, t-amyl alcohol was distilled off under reduced pressure, and 30 ml of water was added to the residue to dissolve the soluble components. The mixture was subjected to filtration to separate out the insolubles. The aqueous solution thus obtained was washed with chloroform, and concentrated hydrochloric acid was added to adjust pH<1. The precipitated oil component was extracted with chloroform. The solvent was distilled off under reduced pressure, and the residue was purified with silica gel column chromatography (eluent: ethyl acetate/ethanol = 9/1) to obtain 2.3 g of the desired product. (Yield: 66%, melting point: 116 - 118°C)

EXAMPLE 2

25

30

Pr paration of 1-ethyl-5-hydroxy-4-(4-methanesulfonyl-3-methoxycarbonyl-2-methylbenzoyl)pyrazole

1.12 g (0.01 mol) of 1-ethyl-5-hydroxypyrazole was dissolved in 30 ml of t-amyl alcohol, and 2.72 g (0.01 mol) of 4-methanesulfonyl-3-methoxycarbonyl-2-methylbenzoic acid, 2.27 g (0.011 mol) of N,N'-dicyclohexylcarbodiimide and 0.76 g (0.0055 mol) of anhydrous potassium carbonate were sequentially added thereto. The mixture was reacted at 80°C for 6 hours under stirring. After completion of the reaction, t-amyl alcohol was distilled off under reduced pressure, and then water was added to the residue to dissolve the soluble component. The mixture was subjected to filtration to separate out the insolubles. The aqueous solution thus obtained was washed twice with chloroform, and then concentrated hydrochloric acid was added to adjust pH<1. The precipitated oil component was extracted with chloroform. The chloroform layer was washed sequentially with water and a saturated sodium chloride aqueous solution and then dried over anhydrous sodium sulfate. Then, the solvent was distilled off under reduced pressure, and the residue thus obtained was recrystallized from water/ethanol to obtain 2.26 g of the desired product. (Yield: 62%, melting point: 150 - 152°C)

45 EXAMPLE 3

Preparation of 5-hydroxy-(3-isopropoxycarbonyl-4-methanesulfonyl-2-methylbenzoyl)-1-methylpyrazole

The operation and treatment were conducted in the same manner as in Example 1 except that 1.12 g of 1-ethyl-5-hydroxypyrazole was changed to 0.98 g of 5-hydroxy-1-methylpyrazole, and 2.72 g of 4-m thanesulfonyl-3-methoxycarbonyl-2-methylbenzoic acid was changed to 3.00 g of 3-isopropoxycarbonyl-4-methanesulfonyl-2-methylbenzoic acid, to obtain 1.71 g of the desired product. (Yield: 45%, melting point: 192 - 194°C)

EXAMPLE 4

33

Preparation of 4-(2-chloro-3-ethylthiomethyl-4-methanesulfonylbenzoyl)-1-ethyl-5-hydroxypyrazole

3 g of 2-chloro-3-ethylthiomethyl-4-methanesulfonylbenzoic acid, 0.72 g of potassium carbonate, 50 ml of t-amyl alcohol, 1.95 g of N,N'-dicyclohexylcarbodiimide and 4.5 g of a 25% t-amyl alcohol solution of 1-ethyl-5-pyrazolone were mixed and heated under stirring for 4 hours at a temperature of from 70 to 80°C. After cooling, the mixture was distilled under reduced pressure, and 200 ml of water was added to the residue. After filtering off the insolubles, the filtrate was washed with chloroform. Hydrochloric acid was added to the aqueous layer, and the mixture was extracted with chloroform. The extract was dried, and the solvent was distilled off to obtain the desired product as a crude product. The crude product was recrystallized from ethanol to obtain 1.88 g of the purified product. (Melting pont: 142 - 145°C)

. EXAMPLE 5

Preparation of 4-(2-chloro-5-ethanesulfonylmethyl-4-methanesulfonylbenzoyl)-1-ethyl-5-hydroxypyrazole

0.5 g of the compound obtained in Example 4 was dissolved in a solution comprising 30 ml of CHCl₃ and 30 ml of THF at room temperature, and 2.2 equivalent of m-chloroperbenzoic acid was added thereto under cooling in ice bath. The mixture was gradually returned to room temperature and stirred for 1 day. The solvent was distilled off, and crystals thus obtained were collected by filtration and washed with ethyl ether to obtain 2.2 g of the desired product. (Melting poing: 133 - 135°C)

EXAMPLE 6

25

<u>40</u>

45

Preparation of 4-(2-chloro-3-ethanesulfinyl-4-methanesulfonylbenzoyl)-1-ethyl-5-hydroxypyrazole

0.45 g of the compound obtained in Example 4 was dissolved in 30 ml of dioxane, and 0.21 g of sodium bromite trihydrate was added thereto. The mixture was stirred at room temperature for 30 minutes, and then water was added thereto. The mixture was extracted with chloroform. The extract was dried, and the solvent was distilled off to obtain a crude product. The crude product was purified by column chromatography (eluted with chloroform/ethanol) to obtain 0.2 g of the desired product as an oily substance.

35 EXAMPLE 7

Preparation of 4-(2,4-dichloro-3-methoxycarbonylbenzoyl)-1-ethyl-5-hydroxypyrazole

This compound was prepared in the same manner as in Example 2. Melting point: 167-170°C.

EXAMPLE 8

Preparation of 5-benzyloxy-4-(2,4-dichloro-3-methoxycarbonylbenzoyl)-1-ethylpyrazole

A solution prepared by dissoving 0.3 g of the compound prepared in Example 7 and 0.1 g of triethylamine in 13 ml of benzene, was stirred at room temperature for 30 minutes, and then at 50°C for 3 hours. Insoluble substances were filtered off, and then the filtrate was concentrated under reduced pressure. The concentrated product was purified by silica gel column chromatography (eluent: benzene/ethyl acetate) to obtain 0.15 g of the desired product as an oily substance.

EXAMPLE 9

55 Preparation of 5-hydroxy-4-(4-methanesulfonyl-3-methoxymethyl-2-methylbenzoyl)-3-methoxymethyl-1-methylpyrazole

(1) 5-(4-methanesulfonyl-3-methoxymethyl-2-methylbenzoyl)oxy-3-methoxymethyl-1-methylpyrazole

1.9 g of 5-hydroxy-3-methoxymethylpyrazol was added to a mixture consisting of 8 ml of an aqueous solution containing 0.5 g of potassium hydroxide (85%) and 12 ml of chloroform, and then 4-methanesulfonyl-3-methoxymethyl-2-methylbenzoyl chloride was added thereto. The mixture was stirred for 3 hours at room temperature. Then, the reaction mixture was extracted with chloroform. The chloroform solution was washed with water and dried to obtain the desired product substantially quantitatively as an oily substance.

(2) 5-hydroxy-4-(4-methanesulfonyi-3-methoxymethyl-2-methylbenzoyi)-3-methoxymethyl-1-methylpyrazole

3.0 g of the compound obtained in step (1), 2.7 g of potassium carbonate and 8 ml of dioxane, were stirred at 120°C for 3.5 hours. 20 ml of water was added thereto and then the mixture was left to cool. The reaction solution was washed with chloroform and acidified with hydrochloric acid. The reaction solution was extracted with chloroform, washed with water and dried to obtain 1.8 g of a crude product. The crude product was recrystallized from ethanol to obtain 1.2 g of the desired product. Melting point: 100-104°C.

EXAMPLE 10

10

25

30

40

45

50

55

Preparation of 4-(3-acetoxymethyl-2-chloro-4-methanesulfonylbenzoyl)-1-ethyl-5-hydroxypyrazole

This compound was prepared in the same manner as in Example 2. Melting point: 140-144°C

EXAMPLE 11

Preparation of 4-(2-chioro-3-hydroxymethyl-4-methanesulfonylbenzoyl)-1-ethyl-5-hydroxypyrazole

To 30 ml of a methanol solution containing 0.3 g of the compound prepared in Example 10, 5 ml of an aqueous solution containing 0.1 g of sodium hydroxide (93%) was added, and the mixture was stirred for 2 hours at room temperature. Methanol was distilled off under reduced pressure. Then, hydrochloric acid was added to the residue. The precipitated product was collected by filtration to obtain 0.2 g of the desired product. Melting point: 70-76°C.

The physical properties of the compounds prepared in the same manner as the preceding Examples will be given in Tables 3 and 4 including those of the preceding Examples.

5		·		Melting point (°C)	Oily substance	Oily substance	$116 \sim 118$	Oily substance	$274 \sim 274.5$	$199\!\sim\!201$	150~152
	-	502 Me	•	G	=	CII 2 P h	=	=	=	=	=
15			a	7	S02Me	SOzMe	SOzMe	SOzMe	S02Ne	SOz Me	SOz Me
25	Table 3		0 Z— v	*	CII 2 OMe	CII 2 0 Me	CII s OMe	CII 2 O Me	U 2 0 3	C0 2 Ne	CO ₂ Ne
				×	Ме	Ме	Ме	Ив	Me	Ме	Ме
30			-	В	=	=	=	=	==		=
35	•			∢	x	. . .	=	i-pr	Me	Ив	E t
40				Compound No.	-	8	က	4	ß	9	7

5		Melting point (°C)	$174 \sim 174.5$	$78\sim 81$	$192\!\sim\!194$	$125\!\sim\!128$	$123 \sim 126$	Oily substance	178~179	Oily substance	Oily substance	Oily substance	$238\!\sim\!240$	$138 \sim 141$	$189 \sim 190$	
10		Q	=	=	=	=	=	p-Ts	=	=	=	=	_	=	= .	
15	a	7	SO. Me	SOz Me	SO 2 MB	SO ₂ Me	7 J	C &	SOzMe	SO z Me	SO.Me	SO. Me	SO 2 Me	SO. Me	SO. Me	
20	Table 3 (continued)	\ \	CO . B t	1 2 ° 0 0	CO.Pr-1	CO.Pr-1	60 z Me	CO 2 Me	CII 10Et	CII 2 OB t	CII 2 OE t	CII 2 OE t	Спивойе	Спиеоив	CII 2 OMe	
	Table	×	¥e			æ	<i>7</i> 0	J 3	Me B	Мв	Ив	W.	¥e	æ	C &	
30		В	=	=	=	=	=	=	=	. =	=	Жe	=	=	=	
35		· V	e z	1	æ e	H 1	M o	Мв	Ж	83	i-Pr	æ	Me	# # # # # # # # # # # # # # # # # # #	Мв	
40		Compound No.	8	6	1 0	1-1	1 2	 	1.4	1 5	1 6	1 7	1 8	6 1	2 0	

Table 3 (continued)

. 25

Compound No.	4	В	×	γ	Z	G	Melting point(°C)
2 1	स +	=	Ø 9	CII 20Ne	SO. He	=	151 ~154
2 2	I-Pr	=	C B	CII 2 O Me	SO ₂ Ne	=	142 ~144
2	B t	=	#	Cll 2 0 P r - 1	SOz Me	=	$125 \sim 127$
2 4	Ме	=	Ие	CO2CH2CH2ONe	SO ₂ Me	=	114~117
2 5	1	=	Не	CO2CH2CH2ONe	SOzMe	=	$122 \sim 124$
2 6	Ж	=	C B	CII 2 OCII 2 CII 2 ONO	SOzMe	=	$157 \sim 161$
2 7	ب د	=	C B	CII 2 SE t	SO z Ne	=	$142 \sim 145$
2 8	+	=	C P	CII 2 SOB t	SO 2 Me	=	Oily substance
5 9	1 1	=	C R	CH 2 SO 2 B t	SO ₂ Me	=	$-133 \sim 135$
3 0	10	=	Ме	COrPr-n	SO z Me	=	Oily substance

5		Melting point (°C)	Oily substance	$220\!\sim\!222$	$179\!\sim\!183$	$183 \sim 185$	174~176	$138 \sim 140$	161 ~ 164	Oily substance	$180 \sim 190$	$210 \sim 216$	Pr-i 95~102	$195 \sim 198$
10		8	==	=	=	=	==	=	=	=	×	Na	A . E N	=
15		7	SOz He	SO. He	SO _z Me	SO. He	SO. Me	SO. He	SOzNe	SOz Me	SO. He	SO. No	SO2 He	S0. He
20	ntinued)			\bigcap	\bigcap	ø	œ	ø		G -	a		m	
25	Table 3 (continued)	\	N Ello	200	>200	CO z He	CO z Ne	CO z Ne	CII 2 OC	Cli 20Am-n	CII 2 O Me	CII 2 0 Me	CII 20Me	COz Ne
30	. Tab	×	7 3	Me	₩ B	g o	C &	C &	C &	C &	H e	W.		ОМе
		В		=	=	=	=	-=	=	=	=	=	=	=
35		A	W W	E	# +	æ	R t	Pr-1	B t	Me Me	R t	3	# 23	Ме
40		Compound No.	en	3 2	ဇာ	3 4	3 5	3 6	3 7	3 8	3 9	4 0	4 1	4 2

5		Melting point (°C)	117~119	$141 \sim 143$	$167 \sim 170$	$232\!\sim\!242$	116~121	$154 \sim 157$	$149 \sim 152$	$172 \sim 175$	167~170	Oily substance	144~151
10	-	Q Me	=	=	=	1/2 Ca	=	==	=	=	=	CII 2 - Ph	=
15		2	S02 Me	SO2Me	SOZMe	SOzMe	SOzMe	SOZNB	SOzMe	SOzHe	CE	C L	C D
20 25	Table 3 (continued)	\	C02Pr-1	. C0.Pr-i	CH & OCH & CP 3	CII 20 No	CO. He	CII 2 O Me	C02C112C112C &	CO 2 Me	CO.Me	CO 2 Me	СОгИв
30	Ţaj	В	g d	CR	T O	Ме	He	0Ме	Ж	ONe	C &	g J	g o
35	-	, A	Me II	Bt	Me II	Bt H	pr-i II	ж Пе	B t	1 2 2	B t	B t	pr-i
40		Compound No.	4 3	4 4	4 5	4 6	4 7	4 8	4 9	5 0	5 1	5 2	5 3

	Melting point (°C)	104~110	$100 \sim 104$	$235\!\sim\!239$	140~144	91 ~ 01	142~146	$102 \sim 104$	100~104	Oily substance	141~144	165~171	123~126	Oily substance	Oily substance	Oily substance	44~07
	G.	CH r - Ph	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
	2	C 2	SO. N'e	SO. Ha	SO ₂ Me	SO. Ma	SMe	7)	SO. No	SXe	C R	S0.2 Me	SO. He	SO Me	SOz He	SO. Ne	CO. No.
Table 3 (continued)	>	CO.He	CII z 0 Me	CII . CN	CII . OAc	CII 2 0 II	C0 # He	CII 2 OMe	CO 2 B t	CII z O Ne	CII 2 O N a	CII=CIIONe (trans)	18 ° 0')	CII 20Me	CIIMeOEt	CHE toke	CONCE
Table	×	C &	X e	. . .	C P	C P	He	g 3	C 2	о ж	g J	7 3	C &	ОМе	Me	æ	0 3
	В	==	CII 2 OMe	==	=	=	=	==	=	=	=	=	=	=	=	=	=
	T V	Pr-1	ž	#	#	3	63 44	# #	픖	22	×	3	Pr-1	# #	표	₩	ċ
	Compound No.	57 4	5	5 6	5 7	5 8	6 9	0 9	6 1	. 2 9	6 3	6 4	6 5	9 9	1 9	8 9	9

The compounds represented by the Compound Nos. in the following Table are the same as represented by the corresponding Compound Nos. in Table 3.

Table 4

5	Compound No.	¹ H-NMR (δ, ppm) [Solvent]
	1	2.47(3H,s), 3.22(3H,s), 3.50 (3H,s),
10		3.69(3H,s), 4.96(2H,s), 7.30(1H,s),
10		7.78(2H, A-Bq), 10.9(1H) [CDC 2 3]
15	2	2.41(3H.s), 3.17(3H.s), 3.50 (3H.s),
10		4.94(2H,s), 5.53(2H,s), 7.30~8.12
		(8H, m) (CDC L z)
20	3	1.44(3H,t), 2.48(3H,s), 3.23 (3H,s),
		3.51(3H,s), 4.07(2H,q), 4.98(2H,s),
25		7.36(1H,s), 7.82(2H,A-Bq) (CDC £ 3)
	4	1.48(6H,d), 2.47(3H,s), 3.19 (3H,s),
30		3.48(3H,s), 4.53(1H,m), 4.92(2H,s),
		7.18(1H,s), 7.69(2H,A-Bq), 9.57(1H)
35		(CDC L 3)

Table 4 (continued)

	Compound No.	'H-NMR (δ, ppm) [Solvent]
	13	2.43(3H,s), 3.78(3H,s), 3.94 (3H,s)
,		7.24 \sim 7.81(7H, m) (CDC ℓ_3)
i	15	1.07(3H,t), 2.27(3H,s), 3.01 (3H,s)
		$3.30 \sim 3.65(5H,m), 4.77(2H,s),$
		6.99(1H,s), 7.48(2H, A-B q),
•	•	8.22(1H,s) (CDC 2 3)
	28	1.45(3H,t), 3.04(2H,q), 4.05 (2H,q)
		4.91(2H,q), 7.29(1H,s), 7.70 (1H,s)
		7.85(2H,q) (CDC.L.3)
	30	$0.91 \sim 2.03(8H, m)$, $2.41(3H, s)$,
	•	$3.20(3H,s)$, $3.91 \sim 4.47(4H,m)$,
-		7.36~8.08(4H,m), (CDC 2 3)
	16	1.26(3H,t), 1.49(3H,d), 2.49 (3H,s)
		3.24(3H,s), 3.69(2H,q), 4.59 (1H,m)
i		$5.00(2H,s)$, $7.28 \sim 8.14(4H,m)$,
		(CDC L 3)

43

50 ..

Table 4 (continued)

5		•
	Compound No.	'H-NMR (δ, ppm) [Solvent]
10	17	1.27(3H,t), 1.67(3H,s), 2.42 (3H,s),
		3.23(3H,s), 3.63(3H,s), 3.68 (2H,q),
		5.02(2H,s), 7.7 (1H,s),
15 .		7.75 (2H, A-B q) (CDC L 3)
		•
20	62	1.45(3H,t), 2.49(6H,Broad s),
		3.44(3H,s), 4.03(2H,q), 4.66 (2H,s),
		7.29(2H,q), 7.39(1H,s),
25	66	1.47(3H, t), 3.29(3H, s), 3.51(3H,s)
	-	3.82(3H,s), 4.09(2H,q), 5.00 (2H,s),
3 <i>0</i>		7.50(1H,s), 7.84(2H,A-Bq), 7.96(1H,s)
		(CDC L 3)
35	67	1.07-1.67 (9H, m), 2.59(3H,s)
	•	3.17(3H,s), 3.42(2H,t), 3.96 (2H,t),
		5.61(1H,q), 7.27(1H,s), 7.61(2H,A-Bq)
40		9.66 (1H, Broad s) [CDC L 3]
45	68	· 1.09(3H,t), 1.45(3H, t), 2.55(3H,s)
		3.16(3H,s), 3.27(3H,s),
		3.70-4.20(4H,m), 5.13-5.36(1H,m),
5 <i>0</i>		7.14(1H,s), 7.60(2H, A-Bq),
		9.46(1H, Broad s) (CDC & 3)
55		

Compounds which can be prepared in the same manner as the preceding Examples will be given in Table 5 including those of the preceding Examples. However, the present invention is not restricted to such compounds.

Various symbols used in Table 5 has the following meanings.

$$Y6: -CH_2 - CH_2$$

$$Y11: -N = H$$
, $Y12: -N = H$,

- 30

Table 5

10

B C Y Y

15

	A	В	X	Y	Z	Q:
20	Йe	H	C1	COOMe	MeS	H H H
	Me	H	C1	COOMe	MeS0	H
	Иe	H	C1	C00Me	Ms	H
	Иe	H	CI	COOMe	Ms	Q1
25	Иe	H	CI	C00Me	Ms	Q2
	Иe	H	C1	COOMe	Ms	Q3
	Иe	H	C1	C00Me	Ms	Q4
	Мe	H H H	C1	COOMe	Ms	94 95
30	Мe	H	CI	C00Me	Ms	96
30 .	Me	H -	CI	C00Me	Ms	920
	Иe	Me	CI	C00Me	Ms	H
	Me	CI	CI	C00Me	. Ms	H H H H H H
	Me	CF ₃	Cl	C00Me	Ms	· H
35	Мe	0Me	CI	C00Me	Мs	H
	Иe	SMe	Cl	COOMe	Ms	H
	_He	H	CI	COOEt	MeS	H
	Me	H	CI	COOE t	MeS0	<u>H</u>
	Иe	H H	CI	COOEt	zľ.	H
40	Иe	H	Cl	COOEt	Ms	Q1
	lle	H H	C1	COOEt	Ms	918
	Иe	H	Cl	COOEt	zľs	Q13
	Иe	H	CI	COOEt	Ms	94
45	Йe	H	CI	COOEt	Ms	95
	Иe	H	CI	COOE t	Ms	96
	Йe	H	C1	COOEt	Ms	<u>9</u> 22
	Иe	Мe	C1	COOEt	Ms	H H
	Йe	Cl	Cl	C00Et	Ms	H
50						

						-
	<u>A</u>	В	X	Y	Z	Q.
5	Иe	CF ₃	Cl	COOEt	Ms	H
	Me Me	0Me SMe	CI	COOE t	Ms	Ħ
	Me	H	CI CI	COOEt	Ms	H
10	Me	Ħ	CI	COOCH (CH ₃) ₂ COOCH (CH ₃) ₂	MeS MeSO	Н Н Н Н П
	Me	H H H	CI	COOCH (CH ₃) ₂	Ms	д Н
	Me Me	H	C1	COOCH (CH ₃) ₂	Ms	Q 7
	Не	H	C1 C1	COOCH (CH 2) 2	Ms	Q12
15	Me	Ħ	ČÌ	COOCH (CH ₂) ₂ COOCH (CH ₂) ₂	Ms Ms	99 94
	Иe	H	CI	COOCH (CH ₃) ₂	Ms	Q 5
	Me Me	H H H H H	CI C1	COOCH (CH ₃) ₂	Ms	96
20	Me	Иe	CI	COOCH (CH ₃) z COOCH (CH ₃) z	Ms M-	917
20	Мe	CI	CI	COOCH (CH ₃) z	Ms Ms	H.
	Me Me	CF ₃	CI	COOCH (CH ₃) ₂	Ms	H
	Me	0Me SMe	CI	COOCH (CH ₃) ₂ COOCH (CH ₃) ₂	Ms	H
25	Мe	. Н	CI .	COOCH (Chay 2	Ms Cl	H H
	Me	H	CI	COOMe -	CI	äı
	Me Me	H	C1 C1	COOMe	CI	Q2
	Me	Ē.	CI	COOMe COOEt	CI CI	93 H
30	Мe	H H H	CI	COOEt	ČÎ	ü 1 ·
	Me Me	H H	CI C1	COOE t	C1	92
	Мe	Ħ	CI	COOEt COOCH (CH ₃) _z	C1 C1	. дз
35	Ме	H	CI	COOCH (CH ₃) ₂	CI	01
	Me Me	H H H H	CI CI	COOCH (CH ₃) ₂	C1	Q2
	Мe	Ħ	CI	COOCH (CH ₃) ₂ CON (CH ₃) ₂	C1 MeS	Q3
	Me	H	CI	CON (CH ₃) 2	MeSO	H H
40	Me Me	H H	CI	CON (CH ₃) z	Ms .	. H
	Me	H	CI CI	CON (CH ₂) ₂ CON (CH ₃) ₂	Ms Ms	19
	Мe	H H	CI	CON (CH ₂) ₂	ns Ms	Q18 Q13
45	Me Me	H H	CI	CON (CH ₃) ₂	Ms .	Q4
	ne Me	п Н	CI CI	CON (CH ₃) ₂ CON (CH ₃) ₂	Ms Ma	95
	Me	H	CI	CON (CH ₃) ₂	Ms Ms	96 922
-						

	A	В	Χ.	Y	Z	Q.
5	Иe	Me	Cl	CON (CH ₃) ₂	V-	
	Иe	CI	CI	CON (CH ₃) ₂	Ms Ha	H
	Иe	CF ₃	CI	CON (CH ₃) z	Ms Ms	H H H H
	Мe	0Me	Cl	CON (CH ₃) _z	ns Ms	п
10	Me	SMe	Cl	CON (CH ₃) ₂	Ms	n n
	Мe	H	Ci	CON (CH ₃) 2	CI	II II
	Иe	Ħ	CI	CON (CH ₃) z	CI	Q 1
	Иe	H	C1	CON(CH ₃) ₂	Či	92
15	Мe	H	CĪ	CON(CH ₂) ₂	CĨ	93
15	Иe	H	C1	C00C_H-	. Ms	Ħ
	Me	H	CI	COOC ₄ H ₉	Cl	Ħ
	Me	H	C1	COOCH ₂ CH (CH ₃) ₂	Ms	Ħ
	Мe	H	C1	COOCH ₂ CH (CH ₃) ₂	C1	H
20	Мe	H H H H H H H H	C1 .	COOCH (CH3) C2H5	Ms	н н н н
	Иe	H	C1	COOCH (CH ₂) C ₂ H ₅	C1 -	- Н
	Me	H	ÇI	COOC (CH ₃) 3	Ms	· Н
	Me	H	CI	COOC (CH ₃) ₃	Cl	H
25	Me	H	C1	CONHMe	Ms	H
25	Йe	Ħ	CI	CONHMe	C1	H H H H
	Ме	H	CI	CONHEt	Ms	H
_	lle M-	H	Cl	CONHEt	C1	H
•	Me M-	H H	CI	CONHCH (CH ₃) ₂	Ms	H
30	Ne Ye	<u>n</u>	C1	CONHCH (CH ₃) ₂	C1	H
	Me Me	H H	CI	CONHC (CH ₂) ₂	Ms	H H H
	ne Ne	H	Cl Cl	CONHC (CH ₂) ₂ CONHC ₄ H ₄	Ç1	H
	Me	H	CI	CONHC ₄ H ₄	Ms CI	н
3 5	Иe	H	CI	CONHCH ₂ CH (CH ₃) ₂	CI	п
35	Иe	H	CI	CONHCH ₂ CH (CH ₃) ₂	Ms CI	H H H
	Île	Ħ	CI	CONHCH (CH3) C2H3	Ms	<u>п</u>
	Йe	H	CI	CONHCH (CH ₃) C ₂ H ₅	CI	H
	Иe	Ħ	CI	CONEt _z	Ms	H
40	Иe	Ħ	CI	CONEtz	CI	Ħ
	Me	Ħ	Cī	CON (CH(CH-)-)-	Ms	Ħ
	Me			CON (CH(CH ₃) ₂) ₂ CON (CH(CH ₃) ₂) ₂	CI	
	Me	H	ČĪ	YI	Ms	Ē
45	Иe	H H H	CĪ	ΫĪ	Ms CI	H H H
	Me	H	C1:	<u> </u>	Ms	Ħ
	Me	H	C1 C1 C1 C1 C1	Y1 Y1 Y2 Y2 Y3	CI	H
	Me	H	CI	X3	Ms	H
						

5	A	В	Х	Y	Z	Q
	Ме	Ħ	Cl	Y3	CI	Ħ
	Me	H	CI	COOPh	Ms	H
	Me Me	H	C1	COOPh	CI	H H H H
10	ne Me	H	C1	COOCH 2Ph	Ms	H
	Me	H	CI CI	COOCH CH CH	C1	H
	Иe	H	. CI	COOCH ₂ CH=CH ₂ COOCH ₂ CH=CH ₂	Ms	H
	Me	Ħ	CI	COOCH ₂ C=CH ₂	CI M-	H
15	Мe	Ĥ	ČĪ	COOCH ₂ C = CH ₂	Ms Cl	<u> </u>
	Иe	H	CĪ	C(0) SMe	Ms	<u>п</u>
	Me	H	CI	C (0) SMe	Cī	Ħ
	Мe	H	C1	C(0)SEt	Ms	H ·
	Me	Ħ	C1	C(0)SEt	CI ·	H H H H H
20	Me	H	C1	$C(0)$ SCH $(CH_3)_z$	Ms	H
	Me Me	H	CI	C(0) SCH(CH ₃) ₂	C1.	H
	ne Me	T.	C1 C1	FREDZ (0) D	Ms	H
	Иe	H H H H	CI	C(0) SC ₂ H ₇ C(S) OMe	CI W_	. H
25	Мe	Ħ	Čĺ	C(S) OMe	Ms C1	H H
	Me ·	H	CI	C(S) 0Et	Ms .	H
	Me	H	C1	C(S)OEt	ČĨ	Ħ
	Мe	Ħ	· CI	$C(S)$ OCH $(CH_{3})_{2}$	Ms .	H
30	Me Me	H .	CI	C(S) OCH (CH ₃) ₂	C1	H
	ne Me	H H H H H	C1 C1	C(S) SC ₃ H ₇	Ms	H
	Me	Ħ	CI	C(S)SC3H7 C(S)SMe	C1 Ms	H
	Me	H H	Č1	C(S) SMe	C1	H H
35	Me		C1	C(S) SEt	Ms	Ħ
	Мe	H H H H	CI	C(S).SEt	CI	Ħ·
	Йe	H	CI	C(S)SCH(CH ₃) ₂	Ms	H
	Ме	H	C1	C(S)SCH(CH ₃)z	CI	H H H
40	Me Me	п	CI	C(2) 2C	Ms	H
	Me	H	CI Me	C(S)SC ₃ H ₇ COOMe	CI	H H
	Йe	Ħ	Me	COOMe	MeS MeSO	
	Me	Ħ	Иe	COOMe	Ms 2N	H H
45	Me	H H	Me	COOMe	Ms	Q 1
	Me	H	Мe	COOMe	Ms	92
	Me	H	Me	COOMe	Ms	Q3
	Me	H	Ие	COOMe	Ms	Q4

0 282 944

	A	В	Х	Y	z	Q
5	Me	H	Me	COOMe	Ms	95
	Мe	·Ħ	Иe	COOMe	ns Ns	96
	lie	Ħ	Йe	COOMe	Ms	920
	Ме	Йe	Иe	COOMe	ns Ns	
10	Me	CI	Иe	COOMe	Ms	п П
	Мe	CF₃	Иe	COOMe	Ms	. <u>II</u>
	Иe	0Me	Me	COOMe	Ms	. n
	Me	SMe	Ме	COOMe	iis Iis	H H H H H H
	Me		Мe	COOEt	MeS	H
15	Me	Ħ	Me	COOEt	MeSO	Ħ
	Me	H H H	Me	COOEt	Ms	Ħ
	Me	Ħ	Иe	COOEt	Ms	Ü1
	Me	Ħ	Ме	COOEt	Ms	<u> </u>
20	Me	Ħ	Me	COOEt	Ms	Q13
	Me	Ħ	Иe	COOEt	Ms	04
	Нe	Ħ	Иe	COOEt	. Ms	Q 5
	Мe	Ħ	Me	COOE :	Ms	Q 6
	Иe	H H H H	Йe	COOEt	Ms	922
25	Иe .	Ме	Me	COOEt	ils	
	Иe	C1	Me	COOEt	Ms	н н н н н н н
	Иe	CF 3	Иe	COOEt	Ns.	H
	Me	0Me	Иe	COOEt	ils	H
30	lte	SMe	Ме	COOE t	Ns .	H
	Иe	H	Иe	COOCH (CH ₃) ₂	MeS	H
	lle	H H H H	lle	. $COOCH(CH_3)_2$	MeS0	H
	Иe	H	Иe	COOCH (CH ₃) ₂	- Ns	H
	lle	H	Йe	COOCH (CH ₃) ₂	Ns .	
35	Иe	H	Ме	COOCH (CH₃) ₂	ns .	Q12
	lle	H	Ме	COOCH (CH ₃) ₂	Ms	99
	île	H	Иe	COOCH (CH ₃) z	Ms	Q4
	Иe	Ħ	Ме	COOCH (CH ₂) ₂	Ns	95
40	Иe	H	Me	COOCH (CH ₃) ₂	ns	96
	Иe	H	Me	COOCH (CH ₃) ₂	žľs	917
	lle	Ме	Me	COOCH (CH ₃) ₂	lls .	H
	Me	C1 CF ₃	Me	COOCH (CH ₃) ₂	iis V	<u>11</u>
	ije Ma	ひとっ	Me V-	COOCH (CH ₃) _z	ns Y-	П U
45	Не	. OMe	Me Ma	COOCH (CH ₃) ₂	. Xs	n v
	lie Me	SMe	Me	COOCH (CH ₃) z	iis Cl	n u
	ile ile	H H	ile No	COOMe COOMe	CI	H H H H Q1
	116	Д	Me	Coorie	<u> </u>	ar.

		· · · · · · · · · · · · · · · · · · ·				
5	A	В	X	Y	Z	Q.
	Иe	H	Me	COOMe	C1	92
	Мe		· Me	COOMe	ĊĬ	Q 3
	Мe	H	Ме	COOEt	CÎ	H
	Me	H	Me	COOEt	ČĪ	äl
10	Me	H	Нe	COOEt	ČĪ	92
	Me	H	Иe	COOE±	CĪ	93
	Мe	Ħ	Me	COOCH (CH ₃) ₂	- CÎ	Ħ
	Me	H H H H H	Me	COOCH (CH ₃) z	CI	ĝ1
15	Мe	H	Me	COOCH (CH ₃) 2	ČĪ.	92
	Me	H H	Йe	COOCH (CH ₃) ₂	CÎ	Q3
	Иe	H	Иe	CON (CH ₃) ₂	MeS	ਸ
	Me	H	Me	CON (CH ₃) ₂	MeSO	Ħ
	Me	H .	Me	CON (CH ₃) z	Ms	H H H
20	Мe	H	Иe	CON (CH ₃) ₂	Ms	äı
	Мe	H	Мe	CON (CH ₂) z	Ms	Q18 .
	Иe	H	Me	CON (CH ₃) z	Ms	Q13
	Иe	H	Me	CON (CH ₃) z	Ms	Q4
	Мe	H	Йe	CON (CH ₃) ₂	Ms	95
25	Мe	H	Me	CON (CH ₃) 2	Ms	96
	Иe	H	Йe	CON (CH ₃) 2	Ms	922
	Мe	Мe	Мe	CON (CH ₃) z	Ms	
	Мe	CI -	Me	CON (CH ₃) z	Ms	Ħ
30	Me	CF ₃	Йe	CON (CH ₃) ₂	Ms	Ħ
	Me	0Me	Йе·	CON (CH ₃) ₂	Ms	Ĥ
	Me	SMe	Мe	CON (CH ₃) z	Ms	H H H H H
	Me	H	Ме	CON (CH ₃) ₂	- C1	- H
	Me	H	Йe	CON (CH ₃) ₂	CI	Q1 ·
35	Иe	H	Иe	CON (CH ₃) _z	C1	92
	_Me	H	Me	CON (CH ₃) _z	CI	93
	Me	H	Me	C00C4H4	Ms	H
	Иe	H	Мe	COOC4H-	CI	H H H
40	Мe	H	Me	COOCH _z CH (CH ₃) _z	Ms	Ħ
40	Мe	H	Хe	COOCH ₂ CH (CH ₃) ₂	C1	H
	Мe	H	Me	COOCH (CH3) CzH5	Ms	H
	Me	H	Мe	COOCH (CH ₅) C ₂ H ₅	Cl	H
	Мe	H	Иe	C00C (CH ₃) 3	Ms	H
45	Me	H	Me	COOC (CH ₃) 3	C1	H.
	Йe	H	Me	CONHMe	Ms	H
	Me	H	Me	CONHMe	C1	H
	Йe	H	Иe	CONHEt	Ms	H

	A	В	Х	Y	Z	Q
5	Me	<u>.</u>	Me	CONHEt	Cl	H
	Иe	H H H H	Ме	CONHCH (CH ₃) ₂	Ms	n n
	Йe	Ħ	Ме	CONHCH (CH ₃) ₂	CI	H H H H H H H H H H H H H H H H H H H
	Нe	ਜ	Иe	CONHC (CH ₃) ₃	Ms	n II
10	Me	Ħ	Me	CONHC (CH ₃) ₃	Cl	n H
	Ме	Ħ	Иe	CONHC 4H 9	Ms	п
	Me	Ħ	Иe	CONHC ₄ H ₂	Cl	11
	Иe	H	Ne Ne	CONHCH ₂ CH (CH ₃) ₂	Ms	П
	Иe	Ħ	lle lle	CONHCH ₂ CH (CH ₃) ₂	CI	# # # # # # # # # # # # # # # # # # #
15	Иe	ਸ	iie	COMICH (CH ₃) 2 C ₂ H ₃	Ms	11
	Ме	H H H	Иe	CONHCH (CH ₃) C ₂ H ₅	CI	<u>п</u>
	lie	Ħ	Me	CONEt _z	Ms	II.
	Иe	Ħ	Йe	CONE tz	CI	n T
20	Ме	H H H H	lle lle	CON (CH(CH ₃) ₂) ₂	Ms	Ħ
	Иe	Ħ	Иe	CON CONTON)	CI	. H
	Me	H.	ne Ne	YI YI	Ms	. H
	Me	H	ne Ne	YI	C1	n n
	Me	Ħ	Иe	N3	Ms	т.
25	Me	Ħ	ne Ne	. 72	C1	п
	Me	Ħ	Иe	¥2 ¥2 ¥3	Ms	нанннинниннин
	Me	Ħ	ne Me	Y3	CI	n n
	Ме	H	. Ne	COOPH	Ms	II IT
	Йe	Ħ	. Ne	COOPh	C1	II.
30	Мe	H	ne Ne	COOCH _z Ph	Ms	12 17
	Иe	Ħ	ne Ne	COOCH ₂ Ph	C1	П.
	Me	H	Ne Ne	COOCH ₂ CH ₂ CH ₂	Ms	. 11
	Me	Ħ	ne Me	COOCH ₂ CH=CH ₂	Cl	ii II
35	Me	Ħ	Ne	COOCH ₂ C ≡ CH	Ms	n n
	Йe	Ħ	ne Ne	COOCH ₂ C ≡ CH	CI	H
	7fe	Ħ	Me	C(0) SMe	Ms	Ħ
	Ме	Ħ	Иe	C (0) SNe	ČĨ	Ħ
	Me	Ħ	ne Ne	C(0) SE t	Ms	Ħ
40	Мe	Ħ	Me	C(0) SE t	ĊĨ	H H
	Йe	Ħ	ne Ne	C(0) SCH (CH ₃) ₂	Ms ·	Ħ
	Me		Иe	C(0) SCH (CH ₃) z	ĊĨ	Ħ
	Me	Ħ	ne Ne	C(0) SC ₃ H ₇	Ms	Ħ
	Me	H H H	ne Me	C(0) SC ₃ H ₇	ĊĨ	H H
45	Me	Ħ	ne Me	C(S) 0Ne	Ms	Ħ
	Иe	H	ne Me	C(S) 0He	CI	Ħ
	Me	Ħ	ne Ne	C(S) OEt	Ns	Ħ
	110	14	116	0(0) 00 0	1143	14

						
5	<u>A</u>	В	X	Y	Z	Q
	Ме	H	Иe	C(S)0Et	CI	Ħ ·
	Мe	H	Иe	$C(S) OCH(CH_3)_z$	Ms	Ħ
	Йe	H H H H	Йe	C(S)OCH(CH ₃) _z	Cl	Ħ
10	Me	H	Иe	C(S)SC ₃ H ₇	Ms	ਜ
	Me	H	Йe	C(S)SC ₃ H ₇	C1	Ħ
	Me	H	lie	C(S)SMe	Ms	Ä
	Me	Ħ	Йe	C (S) SMe	C1	Ħ
	lie	H	Иe	C(S)SEt	Ms	Ħ
15	Me	Н .	Мe	C(S)SEt	- CI	Ħ
	Me	H H - H	lle	$C(S)SCH(CH_3)_2$	Ms	Ħ
	Мe	H	Me	C(S)SCH(CH ₃) ₂	CI	Ħ
	Me	H	Иe	C(S)SC ₃ H ₇	Ms	Ħ
	Мe	H	Me	C(S)SC ₃ H ₇	C1	Ħ
20	Иe	H	0Me	COOMe	MeS	Ħ
	Me	H	0Me	CO0Me	MeSO	H
	Ме	H	0Me	C00Me	Ms	нннннннннннн
	Me	H	0Me	COOMe	Ms	Q1
25	Иe	H H	0Me	CO0Me	Ms	92
	Me	<u>H</u>	OMe	COOMe	Ms	93
	Me	H	0Me	C00Me	Ms	Q4
	Ме	H	0Me	CO0Me	Ms	9 5
	Иe	H	. OMe	COOMe	Ms	96
30	Ме	H	0Me	- COOMe	Ms	920
	Иe	Me	0Me	COOMe	Ms	H · ·
	Me	CI	0Me	COOMe	Ms	H
	Me Me	CF ₃	0Me	COOMe	Ms	<u>H</u> -
35	ne Me	0Me SMe	OMe	C00Me	Ms	H
	ne Me	H	0Me 0Me	COORE	Ms	ii
	ne †le	H.	One One	COOEt COOEt	MeS	H H H H H H H H H
	Иe	H.	0Me	COOEt	MeSO Ms	n H
	Me	H	OMe	COOEt	ns 2K	01
40	Me	H	One OMe	COOEt	ris Ms	g18
	Me	H	0Me	COOEt	Ms	Q13
	Ме	Ħ	OMe	COOEt		Q4
	Иe	Ħ	One	COOEt	Ms Ma	Q 5
45	Ме	H	One One	COOEt	ns Ns	Q 6
	Иe	H	OMe	COOEt	ns Ms	922
	Me	Йe	OMe	COOEt	ns Ms	H
	Иe	CI	OMe	COOEt	ns Ms	Ħ
		<u> </u>	OHE	COULL	112	14

5	A	В	X	Y	Z	ę.
Ū	Мe	CF ₃	0Me	COOEt	Ms	H
	Мe	0Me	0Me	COOEt	Ms	H
	Иe	SMe	0Me	COOEt	Ms	Н Н Н Н Н
	Мe	Ħ	0Me	COOCH (CH ₂) ₂	MeS	Ħ
10	Me	H	0Me	COOCH (CH ₃) ₂	MeSO	H
	Йe	H	0Me	COOCH (CH ₃) _z	Ms	H
	Мe	H H H	0Me	COOCH (CH ₃) ₂	Ms	97
	Me	H,	0Me	COOCH (CH ₃) ₂	Ms	Q12
15	Иe	H	0Me	COOCH (CH ₂) ₂	Ms	99
	Ме	H	0Me	COOCH (CH ₃) ₂	Ms	04
	Иe	H	0Me	COOCH (CH ₃) ₂	Ms	95
•	Иe	H	0Me	COOCH (CH ₃) ₂	Ms	96_
	Йe		0Me	COOCH (CH ₃) z	Ms	917
20	Me	Иe	0Me	COOCH (CH ₃) ₂	Ms	H
	Иe	<u>CI</u>	OMe	COOCH (CH ₃) ₂	Ms	H H
	Me	CF:	0Me	COOCH (CH ₃) ₂	Ms	H H H H Q1
	Me	0Me	0Me	COOCH (CH ₃) ₂	Ms	H
25	Иe	SMe	0Me	COOCH (CH ₂) z	Ms	н
	Йe	Ħ	0Me	COOMe	CI	H
	. Me	H	OMe	COOMe	C1	#I
	Иe	ii T	0Me	COOMe	CI	92
	lle Me	. н Н	OMe	COOMe	CI CI	Q3
30	Йe		OMe	COOEt	CI CI	H 01
	Ме	H	OMe	COOEt COOEt	CI CI	91 92
	Me Me	H H	0Me 0Me	COOEt	CI	Q3
	ne Me	H	One One	COOCH (CH ₃) ₂	C1	H AO
35	ne Ne	H	One One	COOCH (CH ₃) ₂	C1	<u>0</u> 1
	ne Me	H	0Me	COOCH (CH ₃) ₂	C1	92
	-Me	Ħ	0Me	COOCH (CH ₃) 2	CI	93
	Ме	Ħ	0Me	CON (CH ₃) ₂	MeS	
	Ne Me	Ħ	0Me	CON (CH ₃) z	MeSO	Ħ
40	Иe	Ħ	0Me	CON (CH ₃) _z	Ms	H H Q1
	Иe	Ĥ	0Me	CON (CH ₃) z	Ms	Q1
	Me	Ĥ	0Me	CON (CH ₃) _z	Ms	918
	Иe	Ĥ	0Me	CON (CH ₂) 2	Ms	Q13
45	Иe	Ħ	0Me	CON (CH ₃) ₂	Ms	94
	Мe	Ħ	0Me	CON (CH ₃) _z	Ms	95
	Me	Ħ	0Me	CON (CH ₂) z	Ms	9 6
	Йe	Ħ	0Me	CON (CH ₃) ₂	Ms	922
	ue	п	une	CUN (CE3) 2	ıız	444

0 282 944

	A	В	X	Y	Z	Q
5	Me	Ме	OMe	CON (CH ₃) ₂	Ms	H
	Йе ·	C1	0Me	CON (CH ₃) ₂	ns Ms	H
	lle	CF ₃	0Me	CON (CH ₃) 2	Ms	u u
	Мe	0Me	0Me	CON (CH ₃) z	Ms	H H H
10	Иe	Sine	OMe	CON (CH ₃) ₂	Ms	II.
	Me	H	0Me	CON (CH ₃) z	CI	11. TT
	Me	Ħ	0Me	CON (CH ₃) ₂	CI	Q 1
	Me	H H	0Me	CON (CH ₃) 2	CI	92
15	lle	Ħ	OMe	CON (CH ₃) ₂	CI	93
75	Me	Ħ	OMe	C00C_H ₉	Ms	
	Иe	Ħ	OMe .	C00C4H ₂	CI	п П
	Ме	Ħ	0Me	COOCH ₂ CH (CH ₃) ₂	Ms	·#
	Йe	Ħ	0Me	COOCH ₂ CH (CH ₂) ₂	CI	. <u>u</u>
20	Иe	Ħ	0Me	COOCH (CH ₃) C ₂ H ₅	Ms	n.
	Йe	H H H H H	OMe	COOCH (CH ₃) C ₂ H ₅	C1	. #
	Me	H .	0Me	COOC(CH ₃) ₃	Ms	. H
	Иe	Ħ	OMe	COOC (CH ₃) 3	C1	H H H H H H H H H H H H
	Me	H H H	0Me	CONFMe	. Ms -	H
25	Йe	ਸ਼ੌ	0Me	CONHMe	CI	Ħ
	lle	Ħ	0Me	CONHE	Ms	Ħ
	Me	Ħ	OMe	CONHEt	ĊĪ	Ħ
	Me	H H	0Me	CONHCH (CH ₃) ₂	Ms	Ħ
30	Me	Ħ	OMe	CONHCH (CH ₃) 2	C1	Ħ
	Me	Ħ	0Me	CONHC (CH ₃) ₃	Ms	Ħ .
	Me	H	0Me	CONHC (CH ₃) ₃	C1	Ħ
	Me	H	0Me	CONHC 4H =	Ms	· <u>H</u>
	Me	H	0Me	CONHC ₄ H ₉	CI	H
35	Me	H H	0Me	CONHCH _z CH (CH ₃) ₂	Ms	H H H H H H H H H
	Me	H	0Me	CONHCH ₂ CH (CH ₃) ₂	Cl	H
	-Me	Ħ	0Me	CONHCH (CH3) C2H3	Ms	H
	Me	H	OMe	CONHCH (CH3) C2H5	C1	Ħ ·
40	Мe	H	0Me	CONEtz	Ms	Ħ
10	Мe	H	0Me	CONEtz	C1	H
	Мe	H	0Me	CON (CH(CH ₃) ₂) ₂	Ms	H
	Мe	H	0Me	CON (CH(CH ₃) _z) _z	C1	H
	Me	H	0Me	Y1	zM	, H
45	Me	H	0Me	Y1	Cl	. H H H
	Me	H	0Me	Y2	Ms	H
	Мe	H	0Me	Y2	Cl	H
	Иe	H	0Me	. УЗ	Ms	H

		X	Y	Z	Q
5 Me	.	0Me	. УЗ	CI	
Me	a H	0Me	COOPH	Ms	ä.
Me		0Me	COOPH	ČĨ	H H H H H
Me	e H	0Me	COOCH 2Ph	Ms	Ħ
10 Me	e H	0Me	COOCH 2Ph	C1	Ħ
Me	e H	0Me	COOCH 2CH=CH2	Ms	Ħ
Me	e H	0Me	COOCH2CH=CH2	Č1	Ħ
Me		0Me	COOCH ₂ C=CH	Ms	H H H H H H
Me	e H	0Me	COOCH ₂ C=CH	C1	Ħ
15 Me		0Me	C (0) SMe	Ms	H
Me	₽ H	0Me	C (0) SMe	CI	H
Me		0Me	C(0) SE t	ns	H
Me	e H	0Me	C(0)SEt	C1	H
20 M		0Me	C (O) SEH (CH ₃) _z	Ms	Ħ
Me	H	0Me	C(0)SCH(CH ₃) ₂	Cl	. Н Н
Me		0Me	C(0) SC ₃ H ₇	Ms	H
Me		0Me	C(0)SC ₂ H ₇	CI	н н н н
He		0Me	C (S) 0Me	lls	H
25 Me	e H	0Me	C(S)0Me	C1	H
Me		0Me	C(S)OEt	. Ms .	H
Me		0Me	C(S)OEt	CI -	H
Me		. OMe	C(S)OCH(CH ₂) _z	Ms	H H
30 ME		0Me	C(S)OCH(CH ₃) ₂	ÇI	H
Me Me		OMe	C(S) SC ₃ H ₇	Ms Cl	H
Me		. OMe	C(S)SC ₃ H ₇	CI M-	H H H H
rie Me		OMe OMe	C (S) SMe C (S) SMe	Ms CI	П. 17
u.		OMe	C(S) SEt	Ms	n U
35 (16 <u>M</u> 6		One OMe	C(S) SEt	CI	u u
Me		0Me	C(S)SCH(CH ₃) ₂	Ms	. H
Me		One One	C(S) SCH(CH ₃) ₂	ĊĨ	. Н
Me		0Me	C(S) SC ₃ H ₇	Ms	Ħ
40 Me		0Me	C(S) SC ₃ H ₇	CI	Ħ
Me		Br	COOMe	Ms	H
Me		Br	COOMe	Cī	H
Me		Br	COOEt	Ms	H
Ms		Br	COOEt	Cl	H
45 Me		Br	COOCH (CH ₃) ₂	Ms	H
Me		Br	COOCH (CH ₃) ₂	C1	н.
Me		Br	CON (CH ₃) ₂	Ms	H

			· · · · · · · · · · · · · · · · · · ·		·	
5	A	В	X	Y	Z	କ
-	Мe	H	Br	CON (CH ₃) 2	CI	H
	Мe	H	Br	CONHMe	Ms	H
	Me	H	Br	CONHE t	Ms	H
	Me	H H H H	Br	CONHC ₃ H ₇	Ms	H
10	Мe	H	Br	CONHCH (CH ₃) ₂	Ms	H
	Me	H	Br	CONHC (CH ₃) ₃	Ms	H
	Me	H	Br	CONEtz	Ms	H H H H H H H H H H H H H H H H H H H
	Иe	Ħ	Br	CONHC (CH ₃) ₃	Ms	Ħ
15	Мe	H	Br	CONHC 4H 4	Ms	H
	Me	Ħ	Br	CONHC ₄ H ₉	Ms	H
	Me	H	Br	CON (CH(CH ₃) ₂) ₂	Ms	H
	Me	H	· Br	Y1	Ms	H
	Me	H	Br	Y2	Ms .	H
20	Иe	H	Br	COOPh	Ms	H -
	Мe	H	Br	COOCH ₂ Ph	Ms	H
	Me	H	Br	COOCH _z CH=CH _z	Ms	H
	Me	H	Br	COOCH ₂ C=CH	Ms ·	H
25	Me	H	OE t	CO0Me	Ms	H
25	Мe	H	0E t	C00Me	C1	H H H H
	Me	H	OEt	COOE t	Ms	H
	Me	Ħ	0Et	CO0Et	Cl	H
	Me	Ħ	. OEt	COOCH (CH ₃) z	Ms	H
30	Me	H	OEt	COOCH (CH ₃) z	Cl	H
	Иe	H	OEt	CON (CH ₃) z	Ms	H H
	Me	H	OEt	CON (CH ₃) ₂	CI	H
	Йe	H	0Et	CONHMe	Ms	H
	Иe	H	0Et	CONHEt	Ms	H
35	Me	H	0Et	CONHC 3H7	Мs	H
	Мe	H	0Et	CONHCH (CH ₃) ₂	Ms	<u>H</u> .
	-Me	Ħ	0Et	CONHC (CH ₃) ₃) s	H
	Иe	H	0Et	CONEtz	Ms .	H
40	Me	H	0E±	CONHC (CH ₂) ₂	Йs	H
	Me	H	0E t	CONHC ₄ H ₉	Ms	H
	Мe	H	OEt	CONHC ₄ H ₂	Ms	H
	Ме	H	0E t	CON (CH(CH ₃) ₂) ₂	Ms	H
	Ме	H	0E t	¥1	Ms	H H H H
45	Me ·	H	OEt	¥2	. Ms	п ,
	Ме	H	0Et	COOPH	zK Y	n.
	Ме	H	0Et	COOCH 2Ph	Ms	H H
	Me	H	0Et	COOCH ₂ CH=CH ₂	Ms	п

0 282 944

5	A	В	X	Y	·Z	Q
•	lie	H	0Et	COOCH ₂ C≡CH	Ms	H
	Мe	H	OCH (CH ₃) _z	C00Me	Ms	H
	Мe	H	OCH (CH ₃) ₂	COOMe	CI	H
	Мe	H	OCH (CH ₃) ₂	COOEt	Ms	H
10	Me	H	OCH (CH ₃) ₂	COOEt	C1	Ħ
	lie	H	OCH (CH ₃) ₂	COOCH (CH ₃) ₂	Ms	Ĥ
. ,	lle	H H H	OCH (CH ₃) ₂	COOCH (CH ₃) z	CI	н н н н н
•	Me	Ħ	OCH (CH ₃) ₂	CON (CH ₃) ₂	Ms	Ħ
15	Иe	Ĥ	OCH (CH ₃) ₂	CON (CH ₃) ₂	ĊĪ	H H H
10	Мe	Ħ	OCH (CH ₃) ₂	CONHMe	Ms	Ħ
	Йe	Ħ	OCH (CH ₃) ₂	CONHEt	Ms	Ħ
	Иe	Ħ	OCH (CH ₂) ₂	CONHC 3H7	Ms	Ħ
	Ме	Ħ	OCH (CH ₃) z	CONHCH (CH ₃) ₂	Ns 2	Ħ
20	Me	H H H	OCH (CH ₃) ₂	CONHC (CH ₃) ₃	Ms	H
	Иe	n H	OCH (CH ₃) ₂	CONEtz	Ms	H H
	lie	H	0CH (CH ₃) ₂	CONHC (CH ₃) ₃	ns Ns	<u>н</u> п
		ч	OCH (CH ₃) ₂	CONHC ₄ H ₉	ns Ms	и.
	Me	II II	OCH (CH ₃) ₂	CONHC ₄ H ₉	ns Ns	<u>и</u> .
25	Иe	п п	OCH (CH ₃) ₂	CON (CH (CH ₃) ₂) ₂	Ms	T T
	Me	H H H		YI	Ms	
	ne Me	11	OCH (CH ₃) ₂ OCH (CH ₃) ₂	Y2	ns Ns	<u>п</u>
	ne Me	H		COOPh	ns Ns	п
	ne Me	H	2 (EH2) H20.	COOCH ₂ Ph	ns Ns	<u>п</u>
30	ne Me	H.	OCH (CH ₃) ₂		ns Ns	<u>п</u>
	ne Me	Д.	OCH (CH ₃) ₂	COOCH C=CH2		и.
		<u>п</u> 17	OCH (CH ₃) ₂	COOCH ₂ C ≡ CH	lls Ma	. II
	Me '	Д 17	CH ₂ OCH ₃	COOMe	Ms C1	<u> </u>
35	Мe	П 17	CH ₂ OCH ₃	COOMe	C1	<u>п</u>
00	Me M-	H H H H	CH ₂ OCH ₃	COOEt	Ns C	п
	ile Su-	п	CH ₂ OCH ₃	COOEt	Ç1	<u>п</u> 17
	~Me	H	CH ₂ OCH ₃	COOCH (CH ₃) ₂	. SI	нннннн
	Иe	H	CH2OCH3	COOCH (CH ₃) _z	CI	17
40	Me	H	CH 20CH 3	CON (CH ₃) ₂	Ns CI	Д 17
	Ме	H	CH zOCH z	CON (CH ₃) ₂	Ç1	n u
	Me	<u>H</u> -	CH zOCH z	CONHMe) is	п
	Йe	H H	CH = OCH =	CONHE	ils V	H H
	Иe	H	CH 20CH 3	CONHC ₂ H ₇) N	n u
45	Мe	H	CH 2 OCH 3	CONHCH (CH ₃) ₂	jis .	H H
	Иe	H	CH zOCH 3	CONHC (CH ₃) ₃	Яs	. H
	Йe	H	CHzOCH3	CONEtz	ils -	<u>H</u>
	Мe	H	CH ₂ OCH ₃	CONHC (CH ₃) ₃	XIS	H

-A	В	X	Y	Z	Q
lie	H	CH ₂ OCH ₃	CONHC 4R -	Ms	Ħ
Me		CHzOCHz	CONHC 4H +	Ms	H
Me	H	CH ₂ OCH ₃	CON (CH(CH ₃) ₂) ₂	Ms	H
Me	H	CH 20CH3	Yl	Ms	H
Me	H	CH ₂ OCH ₃	Y2	Ms	H
Me	H	CH ₂ OCH ₃	COOPh	Ms	Ħ
Me	H	CH2OCH3	COOCH ₂ Ph	Ms	H
Me		CH2OCH3	COOCH CH=CH2	Ms	H
Me		CH2OCH3	. COOCH ₂ C≡CH	Ms	H
Et		C1	COOMe	MeS	H
Et		C1	COOMe	MeSO	H
Et		CI	COOMe	Ms	H
Et		Čĺ	COOMe	Ms	<u>Q</u> 1

_	A	В	Χ.	Y	Z	Q
5	Et	H	C1	COOMe	Ms	92
	Et Et	H H	CI Cl	COOMe COOMe	ns Ns	Q3 Q4
	Et	H	CI	COOMe	lis	9 5
10	Et	H	C1	COOMe	Ms Ms	96
	Et Et	H Me	CI CI	COOMe COOMe	ns Ns	920 H
	Et	CI	Cl	COOMe	Ms	Ħ
15	Et Et	CF 3 OMe	C1 C1	COOMe COOMe	iis Ms	H H H H
	Et	SMe	CI	COOMe	Ms	Ĥ
	Et	H	CI	COOEt	MeS	H
20	Et Et	H	Cl Cl	COOEt COOEt	HeSO Hs	n H
-ų	Et	H	C1	COOEt	Ms	Q1
	Et Et	H	CI CI	COOE ±	Ms Ms	918 913
	Et	H H H H	C1 C1	COOEt	ns Ms	94
25	Et	H	C1	COOEt	Ms	95
	Et Et	H	CI CI	COOEt COOEt	en En	96 922
	Et	Me 1	CI	COOEt	Ms	
30	Et Et	C1 CF ₃	CI CI	COOEt COOEt	. Ms Ms	H
	Et	OMe	CI	COOEt	Ms	Ħ
	Et	SMe	C1	COOEt	Ms MeS	H
35	Et Et	H H	CI CI	COOCH (CH ₃) ₂ COOCH (CH ₃) ₂	nes MeSO	Н
	Et	H	CI	COOCH (CH ₃) ₂	Ys	H H H H H H Q7
	Et Et	H H	CI CI	COOCH (CH ₂) ₂ COOGH (CH ₂) ₂	Ms Ms	Q12
	Et	H	CI	COOCH (CH ₃) ₂	Ms .	g 9
40	Et	H	C1	COOCH (CH ₃) ₂	Ms Ms	Q4 Q5
	Et Et	H H	CI CI	COOCH (CH ₂) ₂ COOCH (CH ₃) ₂	ar SK	96
	Et	H	CI	COOCH (CH ₃) ₂	Ms	Q17
45	Et Et	Me CI	C1 C1	COOCH (CH ₃) ₂ COOCH (CH ₃) ₂	Ms Ms	H H H
	Et	CF₃	CI	COOCH (CH ₃) ₂ -	Ms	Ħ
	Et	0Me	CI	COOCH (CH ₃) ₂	Ms	<u> </u>

						
5	<u>A</u>	В	X	Y	Z	Q
	Et	SMe	CI	COOCH (CH ₃) ₂	ZK	H
	Et	H	Cl	COOMe	C1	Ħ
	Et	H H H	CI	C00Me	CI	<u> </u>
	Et	H	C1	C00Me	CI	92
10	. Et	H	CI	COOMe	CI	<u> </u>
	Et	H	CI	COOEt	CI	Ħ
	Et	Ħ	Cī	COOEt	CI	ũ1
	Et	Ħ	Cl	COOEt	CÎ	Q2
	Et	Ħ	Cl	COOEt	C1	Q 3
15	Et	Ħ	C1	COOCH (CH ₃) _z	CI	H
	Ēt	H	C1	COOCH (CH ₃) ₂	CI	<u>0</u> 1
	Et	H	CI	COOCH (CH ₃) ₂	CI	Q2
	Ét	H	CI	COOCH (CH ₃) ₂	C1	. 03
20	Et	Ħ	CI	CON (CH ₃) ₂	MeS	
	Et	H	C1			H
	Et	H	CI	CON (CH ₃) ₂	MeSO	H
	Et	H	CI CI	CON (CH ₃) ₂) Ms	H
	Et	П 7		CON (CH ₃) ₂	Ms	Q1
25	Et	H H	CI	cov(CH ₃) ₂	Ms	918
	Et	H	CI	CON (CH ₂) ₂	Ms	913
	Et	n v	CI	CON (CH ₃) ₂	Ms	84
	Et	H H	C1	CON (CH ₃) ₂	Ms	95
	Et	H .	C1	CON (CH ₃) _z	lis	96
30	Et	п Ме	C1	CON (CH ₃) z	Ms	922
	Et	ne CI	C1	CON (CH ₃) ₂	Ms	H
	Et	CF ₌	. CI	CON (CH ₂) _z	Ms	H H H
	Et	OMe	CI	CON (CH ₂) ₂	Ms	H
35	Et	one SMe	C1	CON (CH ₃) ₂	lis	Щ
33	Et	3rie	CI CI	CON (CH ₃) z	Ms Ci	H.
	Et	H	CI	CON (CH ₃) ₂	CI	H .
	Et	n H	CI	CON (CH ₃) 2	C1	Q1
	Et	H	CI CI	CON (CH ₃) z	C1	92 93
40	Et	а Н		CON (CH ₃) z	C1	
	Et	л Н	CI	C00CaH4	Ms	H H
			CI	COOC 4H4	Ç1	n V
	Et	H	Cl	COOCH ₂ CH (CH ₃) ₂	Ms Si	H H
	Et	H	C1	COOCH ₂ CH(CH ₃) ₂	C1	Н
45	Et	H	Cl	COOCH (CH ₃) C ₂ H ₅	Ms	H H
	Et	H	CI	COOCH (CH ₃) C ₂ H ₅	C1	Ħ.
	Et	H	Cl	COOC (CH ₃) 3 -	Ms	H
	Et	H	CI	COOC (CH ₃) 3	Cl	H

5	A	В	X	Y	Z	Q.
	Et E‡	H	CI CI	CONHMe CONHMe	Ms CI	H
10	Et Et Et	H H H H	CI CI CI	CONHE ± CONHC ± CONHCH (CH ₃) ₂	Ms Cl Ms	H H · H H
15	et et et	H H H	C1 C1 C1 C1	CONHCH (CH ₃) ₂ CONHC (CH ₃) ₃ CONHC (CH ₃) ₃ CONHC ₄ H ₉	C1 Ms C1 Ms	H H H H
20		нннннн	C1 C1 C1 C1 C1	CONHC 4H 5 CONHCH 2CH (CH 3) 2 CONHCH 2CH (CH 3) 2 CONHCH (CH 3) C 2H 5 CONHCH (CH 3) C 2H 5 CONE 2	CI Ms CI Ms CI Ms	нннннннн
25	E E E E E E E E E E E E E E E E E E E	H H H H	C1 C1 C1 C1 C1	CONE tz CON (CH (CH ₃) ₂) ₂ CON (CH (CH ₃) ₂) ₂ Y1 Y1	CI Ms CI Ms C1	H H H H H
30	Et Et Et	H H H H	CI CI CI	Y2 Y2 Y3 Y3	Ms C1 Ms C1	H H
35	Et Et Et Et	H . H H H	C1 C1 C1 C1 C1 C1	COOPh COOPH COOCH ₂ Ph COOCH ₂ Ph COOCH ₂ CH=CH ₂ COOCH ₂ CH=CH ₂	Ms C1 Ms C1 Ms C1	H H H H H
40	Et Et Et	H H H	C1 C1 C1 C1	$C00CH_2C = CH$ $C00CH_2C = CH$ C(0) SMe C(0) SMe	Ms Cl Ms Cl	H H H H
45	EEEEE.	H H H	C1 C1 C1 C1 C1	C (0) SE t C (0) SE t C (0) SCH (CH ₃) ₂ C (0) SCH (CH ₃) ₂ C (0) SC ₃ H ₇	Ms Cl Ms Cl Ms	H H H H
	Et	H	Cl	C(0) SC ₃ H ₇	C1	<u>H</u>

55

1

.1

5	<u>A</u>	В	X	Y	Z	Q
·	Et	H	C1	C(S)OMe	Ms	Н
	Et	H H H H	CI	C(S)OMe	Cl	H
	Et	H	Cl	C(S)OEt	Ms	Н Н Н Н
10	Et	H	CI	C(S)OEt	CI	Ĥ
	Et	<u>II</u>	CI	C(S) OCH(CH ₃) ₂	Ms	H
	Et Et	H	CI	C(S) OCH(CH ₃) 2	C1	H
	Et	H H	Cl	C(S)SC3H7	Ms	H
	Et	H	C1	C(S) SC ₃ H ₇	CI	H
15	Et	n u	C1	C(S) SMe	Ms	H
	Et	H	CI CI	C(S) SMe	C1	H
	Et	H	CI	C(S) SEt	Ms	<u>H</u> .
	Et	Ħ	CI	C(S) SEt	C1	H
20	Et	Ħ	ČĪ	C (S) SCH (CH ₃) ₂ C (S) SCH (CH ₃) ₂	Ms .	H H H H H
	Et	Ħ	či	C(S) SC ₂ H ₇	CI	<u>11</u>
	Et	H H H H.	ČĪ	C(S) SC ₂ H ₇	Ms C1	H
	Et	Ħ	Me	COOMe	MeS	- H
	Et	H	Me	COOMe	MeSO	H II
25	Et	H	Йe	COOMe	Ms	H H
	Et	H	Me	-COOMe	Ms	Q1 ·
	Et	H	Me	COOMe	Ms	92
	Et	H	lle	COOMe /	Ms	Q3
30	Et Et	H H H	Me	C00Me	Ms	94
	Et	<u>п</u>	Me -	C00Me	zľ	95
	Et	<u>п</u> .	Йе М-	COOMe	Ms	96
	Et	Йe	Ие Ие	. COOMe	Ms	920
35	Et	CI	Me	COOMe	Ms	H
	Et	CF₃	Иe	COOMe COOMe	Ms Ma	H H H H H
	Et	0Me	Me	COOMe	ds Ns	n u
	Et	SMe	lle	COOMe	is Sk	п. П
	Et	H	Нe	COOEt	HeS	H
40	Et	H	Иe	COOEt	MeSO	H .
	Et	H	Ме	COOEt	Ms	Ĥ
	Et	H H	Иe _	COOEt	Ms	<u>0</u> 1
	Et	H	Me	COOEt	Ms	918
45	Et	H	Me -	C00Et	Ms	Q13
	Et	H	Me	C00Et	Ms	Q4
	Et Et	H	Иe	COOEt	Ms	<u> 95</u>
-	<u> </u>	H	Me	COOEt	Ms	96

0 282 944

	A.	В	X	Y	Z	ę.
5	E+	H	No.	COOEt	Ms	922
	Et Et	n Me	Me Me	COOEt	ns Ns	H
	Et	Cl	Иe	COOEt	Ms	Н Н Н Н Н О7
	Et	CF ₃	Me	COOEt	Ms	Ħ
10	Et	OMe	lle	COOEt	en en	Ħ.
	Et	SMe	Иe	COOEt	Ms	Ħ
	Et		Йe	COOCH (CH ₃) _z	MeS	Ħ
	Et	Ħ	Иe	COOCH (CH ₃) ₂	MeSO	Ħ
	Et	Ħ.	Иe	COOCH (CH ₃) ₂	Ms	H
15	Et	Ħ	Me	COOCH (CH ₃) ₂	Ms	Q7
	Et	H	Иe	COOCH (CH ₃) ₂	Ms	Q12
	Et	H	Иe	COOCH (CH _x) _z	Ms	Ø9
	Et	H H H H	Иe	COOCH (CH ₃) ₂	Ms	94
20	Et	H	Иe	COOCH (CH ₃) ₂	Ms	95
	Et	H	Иe	COOCH (CH ₃) _z	Ms	98
	Et	H	Иe	COOCH (CH ₃) ₂	Ms	917
	Et	Иe	Иe	COOCH (CH ₃) ₂	. Ms	<u>H</u>
	Et	CI	Ме	COOCH (CH ₃) ₂	Ms	Ħ
25	Et	CF 3	Иe	COOCH (CH ₃) ₂	Ms	H
	Et	0Me	Ме	COOCH (CH ₃) ₂	Ms	n u
	Et	SMe	. Ne	COOCH (CH ₃) ₂	Ms Cl	II II
	Et	H	. Me	COOMe	C1 C1	п ГО
30	Et Et	H H	lle Me	COOMe COOMe	C1	02
	Et	п U	Me Ne	COOMe	C1	03
	Et	H H	ne Me	COOEt	ČI	H
	Et	H	Иe	COOEt	či	ä1
35	Et	H H H	Ме	COOEt	CI	92
30	Et	Ħ	Иe	COOEt	C1	93
	Et	Ħ	·Me	COOCH (CH ₃) _z	C1	H H H H H H H H H H H H H H H H H H H
_	Et	H.	Мe	COOCH (CH ₃) ₂	CI	91
	Et	H	Me	COOCH (CH ₃) ₂	CI	92
40	Et	H	Ме	COOCH (CH ₃) ₂	CI	ള 3
	Et	H	Йe	CON (CH ₃) ₂	MeS	. <u>H</u>
	Et	H	Иe	CON (CH ₃) z	MeSO	H
	Et Et	H	lle	CON (CH ₃) 2	Ms	93 H H H 91
45	Et	H	Me	CON (CH ₂) z	Ms	O10
	Et	H	Ме	CON (CH ₃) ₂	Ms	Q18
	Et	H	-Me	CON (CH ₃) _z	Ms Ma	Q13 Q4
	Et	H	Йe	CON (CH ₃) z	Ms	E44

	A	В	X	Y	Z	Q
5				*		
_	Et	H	Ме	CON (CH ₃) ₂	Ms	Q 5
	Et	Ħ	Иe	CON (CH ₃) z	Ms	Q6
	Et	H	Me	CON (CH ₃) z	Ms	922
	Et	Мe	Me	CON (CH ₃) ₂	lls	
10	Et	CI	Me	CON (CH ₃) ₂	Ms	H H H H
	Et	CF 3	Мe	CON (CH ₃) ₂	Иs	H
	Et	0Me	Мe	CON (CH ₃) ₂	Ms	H
	Et	SMe	Me	CON (CH ₃) z	Ms	H
15	Et	H	Мe	CON (CH ₃) 2	Ç1	H
	Et	H	Йe	CON (CH ₃) ₂	CI	Q1
	Et	H	Me	CON (CH ₃) ₂	C1	92
	Et	H	Me	con (ch ₃) z	ČI,	93
	Et	H	Me	C00C4H4	lis	H
20	Et	H	Ме	C00C4H-	C1	H
	Et	H	lle	COOCH ₂ CH (CH ₃) ₂	iis	H H H H
	Et	H.	Ме	COOCH ₂ CH (CH ₃) ₂	C1	н
	Et	H	Йe	COOCH (CH ₃) C ₂ H ₅	Ms	H H
25	Et	H	Ме	COOCH (CH ₃) C ₂ H ₅	CI	n u
	Et	H	Me	COOC (CH ₃) ₃	Ms Cz	п
	Et	H	· Me	z (EHO) 2000	C1	п
	Et ·	H	Мe	CONHMe	· Ms CI	п
	Et Et	H H	. Me	CONHMe	Ms	n n
30	Et	n H	Me Me	CONHE t CONHE t	CI	<u> </u>
	Et	H	ne Me	CONHCH (CH ₃) ₂	Ms	H H H H H H
	Et	H	Me	CONHCH (CH ₃) ₂	CI	· #
	Et	H	Me	CONHC (CH ₃) ₂	Ms	Ħ
35	Et	Ħ	Me	CONHC (CH ₃) 3	C1	H H
••	Et	Ħ	Ме	CONHC 4 H 4	Ms	Ĥ
	· Et	Ħ	Йe	CONHC_H+	C1	H H
	Et.	. H H	Me	CONHCH2CH (CH3) 2	Ms	H
	Et	Ħ	Йe	CONHCH2CH (CH3) z	CI	H
40	Et	H H	Me	CONHCH (CH3) C2H5	Мs	H
	Et	Ħ	Me	CONHCH (CH3) C2H5	C1	H
	Et	H	Me	CONEtz .	Ms	H
	Et	H	Мe	CONEtz	Cl	H
45	Et	H	Мe	CON (CH(CH ₂) ₂) ₂	2M	H
	Et	H	Me	CON (CH(CH ₃) ₂) ₂	C1	H
	Et	H	Me	Y1	Ms	H
	Et	H	Me	AI	C1	H

0 282 944

	A	В	Х	Y	Z	Q
5	Et	H	Me	Y2	Ms	u u
	Et	Ħ	lle	¥2	C1	нннаннининнинниннинниннинниннинниннин
	Et	Ħ	iie Ne	¥3	Ms	Ħ
•	Et	H	Me	¥3	C1-	Ħ
10	Et	H	Йe	СООРЬ	Ms	Ħ
	Et	H H	Me	COOPh	C1	Ä
	Et	H	Мe	COOCH _z Ph	Ms	Ĥ
	Et	H	Ме	COOCH ₂ Ph	C1	Ħ
15	Et	H	Иe	COOCH CH=CH2	Ms	H
75	Et	H H	Иe	COOCH zCH=CH z	C1	H
	Et	H	Me	COOCH ₂ C≡CH	Ms	H
	Et	H	Иe	COOCH _z C=CH	CI	H
	Et	H	Иe	C (0) SMe	Ms	H
20	Et	H	Me	C (0) SMe	C1	H
	Et	H .	Me	C(0) SEt	Ms	H
	Et	H .	Me	C(0) SEt	Ç1	H
	Et Et	H H	Me	C (O) SCH (CH ₂) ₂	Ms	H .
25	Et	H H	Ме М-	C(O)SCH(CH ₃) ₂	CI M-	<u>n</u>
20	Et	H	Ne Ne	C (0) SC₃H₁ C (0) SC₃H₁	Ms C1	n u
	Et	H	Me	C (S) 0Me	Ms	n D
	Et	· H	. Me	C (S) 0Me	CI	n U
	Et	Ħ	Me	C(S) OEt	Ms	Ħ
30 -	Et	Ħ	Иe	C(S) 0E t	ČĨ	Ħ
	Et	Ħ	Мe	C(S)OCH(CH ₃) _z	Ms.	Ĥ
	Et	H	Мe	C(S)OCH(CH ₃) ₂	CI	Ħ
	Et	H	Мe	C(S)SC ₃ H ₇	Ms	H
35	Et	H	Йe	C(S)SC ₃ H ₇	C1	H
	Et	H	Иe	C(S)SMe	Ms	H
	Et	H	Иe	C (S) SMe	CI	H
	Et	H	Me	C(S) SEt	Ms	Ħ
	Et	H	Жe	C(S)SEt	CI .	H
40	Et	H	Ме	C(S)SCH(CH ₃) ₂	Ms	H
	Et	H	Иe	C(S)SCH(CH ₃)z	<u>C</u> I	
	Εt	H H	Йe	C(S) SC ₃ H ₇	Ms CI	n u
	Et Et	ī. T	Me OM-	C(S)SC ₃ H ₇	CI	H H H H
45	Et	H H	OMe	COOMe	MeS MoSO	H H
	Et -	. Н	0Me 0Me	COOMe COOMe	MeSO Ms	Ħ
	Et .	H	OMe	COOMe	ns Ms	äı
		. 44	0176		174	

0 282 944

		ъ	v	7.5		
5	<u>A</u>	B	X	Y	2	<u>୍</u>
	Et	H	OMe	C00Me	Ms	Q2
	Et	H H H H	OMe	COOMe	Ms	Q3
	Et	H	0Me	COOMe	Ms	94
10	Et Et	H	0Me	C00Me	Ms	9 5
10	Et	H	OMe	CO0Me	Ms	Q6
	Et		OMe	COOMe	Ms	920
	Et	Ме	0Me	CO0Me	Ms	H H H H H
	Et.	CI	0Me	COOMe.	, Ms	Ħ
15	Et	CF3	OMe	COOMe	Ms	H
	Et	0Me	0Me	CO0Me	Ms	<u>H</u> .
	Et.	SMe	0Me	COOMe	Ms	H
	Et	H	0Me	COOE ±	MeS	H
20	Et	H	0Me	COOEt	MeSO	H.
20	Et.	H	0Me	COOEt	Ms	H
	Et Et	<u>n</u>	OMe	COOEt	Ms .	QI
	Et	H H H H	OMe	COOEt	Ms V-	Q18
	Et	<u>п</u>	OMe	COOEt	Ms -	· Q13
25	Et	n T	0Me 0Me	COOEt	Ms	Q4 05
	Et	n m	One One	COOE:	Ms Ms	95 96
	Et	H	0Me	COOE	ns Ms	Q 22
	Et	Me	Olie	COOEt	Ms	
3 0	Et	C1	0Me	COOEt	Ms	. #
30	Et	CF3	0Me	COOEt	Ms	Ħ
	Et	OMe	0Me	COOEt	Ms	Ĥ
	Et	SMe	OMe	COOEt	Ms	Ħ
	Εt	H	0Me	COOCH (CH ₃) ₂	MeS	H
35	Et	H	OMe	COOCH (CH ₃) _z	MeSO	H H H H
	Et	H H H H	OMe	COOCH (CH ₃) _z	Мs	H
	Et	H	9K0	COOCH (CH ₂) ₂	Ms	Q7 .
	Et Et	H	0He	COOCH (CH ₃) ₂	Ms	Q12
40	Et	H	OMe	COOCH (CH ₃) ₂	Ms	£ 9
40	Et Et	H	OMe	COOCH (CH ₃) ₂	Ms	04 Q5
	Εt	H	0Me	COOCH (CH ₂) ₂	Ms	
	Et	H	OMe	COOCH (CH ₃) z	Ms	98_
	Et	H	0Me	COOCH (CH ₃) =	Ms	Q17
. 45	Et	Me	0Me	COOCH (CH ₃) ₂	Ms	H H H
	Et	Cl	OMe	COOCH (CH ₃) =	Ms	H :
•	Et E+	CF ₃	OMe .	COOCH (CH ₃) ₂	Ms	H -
	Et	0Me	0Me	COOCH (CH ₃) ₂	Ms	H -

	A	В	X	Y	Z	
5	Et	SMe	0Me	COOCH (CH ₃) _z	W_	
	Et		OMe	COOMe	ys Ci	H H
	Et	H H H H H	OMe	COOMe	CI	<u>п</u> то
	Et	Ħ	OMe	COOME	CI	θĬ
10	Ēt	Ħ	0Me	COOMe	C1	Q2
	Et	ਸ	0Me	COORE	C1	g 3
	Et	Ħ	OMe	COOEt	CI	H Q1
	Et	Ħ	0Me	COOEt	CI	92
	Et	Ĥ	0Me	COOE	C1	Q 3
15	Et	Ħ	OMe	C00CH (CH ₃) z	ČI	H
	Et	Ħ	0Me	COOCH (CH ₃) ₂	CI	Q 1
	Et	H	0Me	COOCH (CH ₃) ₂	ČÌ	92
	Et	H	0Me	COOCH (CH ₃) z	CI ·	Q3
20	Et	Ĥ·	0Me	z (EHD) NOD	MeS	H
	Et	Ħ	0Me	CON (CH ₃) z	MeSO	Ħ
	Et	H	0Me	cON (CH ₂) 2	Ms	E H H
	Et	H	OMe	CON (CH ₂) ₂ CH ₂) ₂	Ms	9 1
	Et	нининнинининин	0Me	CON (CH ₂) ₂ CON (CH ₂) ₂ CON (CH ₂) ₂	Ms	018
25	Et	H	OMe	CON (CH ₂) 2	2M	. 913
	Et	H	0Me	CON (CH ₂) ₂	Ms	94
	Et Et	H	ОМе	CON (CH ₃) ₂	Ms	95
	Et	H	0Me	CON (CH ₃) ₂	Ms	96
30	Et		· OMe	CON (CH ₃) ₂	Ms	922
	Et	Me	0Me	CON (CH ₃) z	Ms	H -
	Et	<u>C1</u>	0Me	CON (CH ₃) ₂	Ms	H
	Et	CF ₃	0Me	CON (CH ₂) ₂	Ms	H
	Et	0Me	0Me	CON (CH ₃) ₂	Ms	H
35	Et	SMe	0Me	con (CH ₃) z	Ms	H H H H
	Et Et	H	OMe	CON (CH ₃) z	C1	H
	Et	H	OMe	CON (CH ₃) z	CI	Q1
	Et	H H	0Me	CON (CH ₃) ₂	CI	Q2
40 .	Et	H	0Me	CON (CH ₃) ₂	C1	93
	Et	H	0Me	COOC ₄ H ₉	Ms CI	H
	Et	H	0Me 0Me	COOCA CA (CA)	<u>CI</u>	
	Et	H	one OMe	COOCH ₂ CH (CH ₂) ₂ COOCH ₂ CH (CH ₃) ₂	Ms Cl	H H
	Ēŧ	H	One OMe	COOCH (CH ₃) C ₂ H ₅	Ms [.]	H
45	Et	H	One OMe	COOCH (CH ₃) C ₂ H ₅	CI	H
	Et	Ħ	One OMe	COOCH (CH ₃) 2	Ms	H
	Et	Ĥ	0Me	C00C (CH ₃) ₃	C1	H
			7			

55

٠,

		· · · · · · · · · · · · · · · · · · ·				
5	<u>A</u>	В	X	Y	Z	Q
Ū	Et	H	0Me	CONHMe	Ms	Ħ
		H H H	0Me	CONHMe	CI	нннинининниннинниннинниннинниннинниннин
	年年七七七	Ħ	0Me	CONHE t	Ms	Ħ
	Et	H	0Me	CONHEt	CI	Ä
10	Et	. Н Н	0Me	CONHCH (CH ₃) ₂	Ms	Ħ
	Et	H	0Me	CONHCH (CH ₃) ₂	CI	Ĥ
	Et	Н Н Н	0Me	CONHC (CH ₂) ₃	Ms	Ĥ
	Et	H	0Me	CONHC (CH ₃) ₃	Cl	Ħ
15	医医医医	H	0Me	CONHC 4H9	Ms	Ĥ
	Et	H	0Me	CONHC₄H₄	CI	H
	Et	H	0Me	CONHCH 2CH (CH3) 2	Ms	H
	Et	H	0Me	CONHCH2CH(CH3)2	CI	H
	Et	Ħ	0Me	CONHCH (CH ₃) C ₂ H ₅	Ms.	H
20	Et	H H H H H	0Me	CONHCH (CH3) C2H5	CI	H
	Et	H	0Me	CONEt ₂	Ms	H
	Et .	H	0Me	CONEtz	CI	H
	Et	H	OMe	CON (CH(CH ₃) ₂) ₂	Ms	H
25	Et	. Ħ	0Me	CON (CH(CH ₃) ₂) ₂	CI	· <u>H</u>
	Et	H	0Me	Y1	Ms	H
	Eŧ	H	0Me	YI	CI	H
	Et	H	0Me	72 Y2 Y3	Ms	H
	Et	H	OMe	Y2	C1	H
30	Et	H	0Me	Y3	Ms	H
	Et	H	0Me	Y3 - C2071	C1	H
	Et Et	<u>п</u>	0Me	COOPH	Ms	n n
	Et	H	0Me	COOPH	CI	<u>11</u>
35	Et	п	0Me 0Me	COOCH DF	Ms Cl	<u>п</u> tr:
00	Et	H .	one OMe	COOCH ₂ Ph COOCH ₂ CH=CH ₂	Ms ·	II.
	-Et	H H H H	0Me	COOCH ₂ CH=CH ₂	CI	. #
	Et	H	0Me	COOCH ₂ CH=CH	ăs Zñ	H.
	Et	H	0Me	COCH ₂ C = CH	CI	Ħ
40	Et	H	011e	C (0) SMe	Ms	H
	Et	H	0Me	C (0) SMe	CI	Ħ
	Ét	Ħ	0He	C(0) SE :	Ms	
	Et	H	0Me	C (0) SE ±	C1	Ħ
45	Et	H	0Me	C (0) SCH (CH ₃) ₂	Ms	H. H H
40	Et	Ħ	0Me	C (0) SCH (CH ₃) ₂	Cī	. H
	Et	H	0Me	C (0) SC ₃ H ₇	Ms	H
	Et	Ħ	0Me	C (0) SC ₃ H ₇	CI	Ħ
				- 1-1 - 4m (

	A	В	Х	Y	Z	ୡ
5	Et	H	0Me	C (S) 0Me	Ms	п.
	Et	Ħ	0Me	C (S) 0Me	CI	нининининининининининининининининини
	Et	Ħ	0Me	C(S) OEt	Ms	H
	F+	Ë	0Me	C(S) 0E ±	C1	H 11
10	Et Et	Ħ	0Me	C (S) HOO (CH ₂) 2	Ms	H
	Et	Ħ	0Me	C (S) OCH (CH ₂) ₂	ĊĨ	Ħ
	Et	H	0Me	0 (0) 00h (0h3) 2 7 1 2 2 (2) 0	Ms	Ħ
	Et	Ħ	0Me	C(S)SC ₃ H ₇	CI	Ħ
	Et	H	0Me	C(S)SMe	Ms ·	Ĥ
15	Et	Ħ	0Me	C(S)SMe	C1	H
	Et Et	H	0Me	C(S)SEt	Ms	H
	Et	Ħ	0Me	C(S)SEt	C1	H
	Et	H	0Me	C(S)SCH(CH ₃) ₂	Ms	H
20	Et	H··	0Me	C(S)SCH(CH ₃) _z	C1	H
	Et	H · .	0Me	C(S)SC ₃ H ₇	Ms	H
	Et	H-	0Me	C(S)SC ₃ H ₇	CI	H
	Et	- Н	Br	C00Me	Ms	H
	Et	H	Br	COOMe	C1	H.
25	Et	H H H H	Br	COOE t	Ms	H
	Et	H	Br	COOE t	CI	H
	Et		Br	COOCH (CH ₃) ₂	Ms	H
	Et	H	Br	COOCH (CH ₃) ₂	CI ·	H
30	Et	Ħ	Br	CON (CH ₃) ₂	Ms	H
	Et	H	Br	CON (CH ₃) ₂	C1	H
	Et	H H H H	Br	CONHMe	Ms	H
	Et	<u>H</u>	Br	CONHE t	Ms	H
	Et	H	Br	CONHC ₃ H ₇	Ms	11
35	Et	H	Br	CONHCH (CH ₃) z	Ms M-	n T
	Et	H	Br	CONFC (CH ₃) ₃	Ms Ms	П U
	Æt	H	Br	CONEtz	ns Ms	n T
	Et	H	Br P-	CONHC (CH ₃) ₃	is is	# #
40	Et E+	H	Br 0-	CONHC4H4 CONHC4H4	iis Ns	H
	Et Et	H H	8r	CON COM/CM))	Ms	H
			Br		en en	Ĥ
	Et Et	H H	Br Br	Y1 Y2	Ms	Ä
	Et	H	Br	COOPH	Ms ·	H H H H
45	Et	H	Br	COOCH ≥Ph	Ms	Ä
	Et	H	Br	COOCH ₂ CH ₂ CH ₂	Ms	H
	Et	H	Br	COOCH ₂ C≡CH	Ms	H
			<u> </u>	7444154 411		

0 282 944

Et H OEt COOMe M Et H OEt COOMe C Et H OEt COOEt M Et H OEt COOET M Et H OEt COOCH (CH ₃) ₂ M Et H OEt COOCH (CH ₃) ₂ C Et H OEt CON (CH ₃) ₂ M Et H OEt CON (CH ₃) ₂ C Et H OEt CON (CH ₃) ₂ M Et H OEt CON (CH ₃) ₂ M Et H OET CON (CH ₃) ₂ M Et H OET CON (CH ₃) ₂ M Et H OET CON (CH ₃) ₂ M Et H OET CON (CH ₃) ₂ M	
Et H OEt COOMe Et H OEt COOEt M Et H OEt COOET OEt H OET COOCH (CH ₃) ₂ M Et H OET COOCH (CH ₃) ₂ C Et H OET CON (CH ₃) ₂ M Et H OET CON (CH ₃) ₂ C Et H OET CON (CH ₃) ₂ C ET H OET CON (CH ₃) ₂ M ET H OET CON (CH ₃) ₂ M	
Et H OEt COOEt COET COET COOCH (CH ₃) 2 M Et H OEt COOCH (CH ₃) 2 C Et H OEt CON (CH ₃) 2 M Et H OEt CON (CH ₃) 2 M Et H OEt CON (CH ₃) 2 M Et H OEt CON (CH ₃) 2 M M M M M M M M M M M M M M M M M M	
Et H OEt COOEt COET COET COOCH (CH ₃) 2 M Et H OEt COOCH (CH ₃) 2 C Et H OEt CON (CH ₃) 2 M Et H OEt CON (CH ₃) 2 M Et H OEt CON (CH ₃) 2 M Et H OEt CON (CH ₃) 2 M M M M M M M M M M M M M M M M M M	
The second representation of the second repr	
Et H OEt $COOCH(CH_3)_2$ C Et H OEt $CON(CH_3)_2$ M Et H OEt $CON(CH_3)_2$ C C $CON(CH_3)_2$ C C $CON(CH_3)_2$ C C $CON(CH_3)_2$ C $CON(CH_3)_3$ Et H $CON(CH_3)_3$ C $CON(CH_3)_4$ Et H $CON(CH_3)_4$ ET H $CON(CH_3)_4$ C $CON(CH_3)_4$ ET H $CON(CH_3)_4$ E	
Et H OEt $CON(CH_3)_2$ M Et H OEt $CON(CH_3)_2$ C Et H OEt $CON(HMe)$ M	
Et H OEt CON(CH ₃) ₂ C Et H OEt CONHMe M	
15 Et H OEt CONHNe M	H H H
10	H H
	H
Et H OEt CONHC-H- M	, 17
Et H OEt CONHCH (CH ₂) 2 M	. П ·
Et H OEt CONHC (CH ₂) 2 M	H -
20 Et H OEt CONEt- M.	Ħ
Et H OEt CONHC (CH ₃) 3 Ms	Ħ
Et H OEt CONHC.H. M.	H
Et H OEt CONHC.H.	H
Et H OEt CON (CH(CH ₂) -) - M	H
25 Et H. OEt YI Ms	H
Et H OEt Y2 Ms	H
Et H OEt COOPh Ms	H H
Et H . OEt COOCH2Ph Ms	H
Et H OEt COOCH-CH=CH- Ms	H
Et H OEt COOCH-C=CH Me	. Ĥ
Et H OCH(CH _T) ₂ COOMe Ms	H
Et H $OCH(CH_3)_2$ COOMe C)	H
Et H OCH (CH ₃) ₂ COOEt Ms	H
35 Et H OCH(CH ₃) ₂ COOEt C1	. Н.
Et H OCH (CH ₃) 2 COOCH (CH ₃) 2 Ms	H
TE H OCH (CH ₂) 2 COOCH (CH ₂) 2 C1	. H :
Et H OCH (CH ₃) ₂ CON (CH ₃) ₂ Ms Et H OCH (CH ₃) ₂ CON (CH ₃) ₂ CI	H
Et H OCH (CH ₃) 2 CON (CH ₃) 2 CI	H
Et H OCH (CH ₃) $_{\rm Z}$ CONHMe Ms	H.
Et H OCH (CH ₂) CONHE t Ms	
Et H OCH (CH ₃) ₂ CONHC ₃ H ₇ Ms	H ·
Et H OCH(CH-) - CONHCH(CH-) - Ms	H
45 Et H OCH (CH ₃) 2 CONHC (CH ₃) 3 Ms	H
Et H OCH(CH ₂) ₂ CONEt ₂ Ms	H ^t
Et H OCH $(CH_2)_2$ CONHC $(CH_3)_3$ Ms	H -
Et H OCH (CH ₃) Z CONHC ₄ H ₂ Ms	

0 282 944

•	A	В	Х	Y	Z	Q
5	Et	H	OCH (CH ₃) ₂	CONHC ₄ H ₉	Ms	H
	Et	H	OCH (CH ₃) ₂	CON (CH(CH ₃) ₂) ₂	Ms	нннннннннннн
	Et	H	OCH (CH ₃) ₂	Y <u>1</u>	Ms	H
10	Et	H	OCH (CH ₃) ₂	¥2_	Ms	Ħ
10	Et	H	OCH (CH ₃) ₂	COOPh	Ms	H
	Et	H	OCH (CH ₃) z	COOCH ₂ Ph	Ms	H
	Et	H	OCH (CH ₃) ₂	COOCH 2CH=CH2	Ms	H
	Et	H	OCH (CH ₃) ₂	COOCH ₂ C≡CH	Ms	H
15	Et	H	CH2OCH3	C00Me	Ms	H
-	Et	H	CH2OCH3	C00Me	C1	H
	Et	H	CH2OCH3	COOEt	Ms	Ħ
	Et	H	CH2OCH3	· COOEt	CI	H
	Et	H	CH2OCH3	COOCH (CH ₃) ₂	Ms	H
20	Et	H-	CH ₂ OCH ₃	COOCH (CH ₃) ₂	C1	H
	Et	H	CH ₂ OCH ₃	CON (CH ₃) _z	Ms	H
	Et	H	CH2OCH3	CON (CH ₃) ₂	. CI	H
	Eŧ	H	CH2OCH3	CONHMe	Ms	H
	Et	H	CH2OCH3	CONHEt	Ms	H
25	Et	H	CH2OCH3	CONHC ₃ H ₇	Ms	H
	Et	H	CH2OCH3	CONHCH (CH ₃) _z	Ms	H H
	Et	H	CH2OCH3	CONHC (CH ₃) ₃	Ms	H H H
	Et	H	CH2OCH3	CONEtz	Ms	H
- 30	Et	H	CH2OCH3	CONHC (CH ₃) ₃	Ms	H
• 55	Et	H	CH2OCH3	CONHC4H4	Ms	H
	Et	H	CH ₂ OCH ₃	CONHC ₄ H ₉	Ms	H
	Et	H	CH ₂ OCH ₃	CON (CH(CH ₃) ₂) ₂	Ms	· H
	Et	H	CH ₂ OCH ₃	Y1	Ms	H
35	Et	H	CH ₂ OCH ₃	Y2	Ms	H
	Et	H	CH2OCH3	COOPh	zM	H
	Ét	H	CH ₂ OCH ₃	COOCH _z Ph	Ms	H
	Et	H	CH ₂ OCH ₃	COOCH zCH=CHz	Ms	H ·
	Et ·	H	CH ₂ OCH ₃	COOCH ₂ C≡CH	Ms	H
40	i-Pr	H	CI	COOMe	MeS	H
	i-Pr	H	C1	CO0Me	MeSO	H
	i-Pr	Ĥ	CI	COOMe	Ms	H
	i-Pr	Ħ	čī	COOMe	Ms	Q1
45	i-Pr	Ĥ	C1 C1	COOMe .	Ms	92
₩.	i-Pr	Ħ	ĊĨ	COOMe	Ms	93
	i-Pr	Ĥ	CI	COOMe	Ms	94
	i-Pr	H	C1	COOMe	Ms	95
			4.			

5	<u>A</u>	B	X	<u>Y</u>	Z	
	i-Pr	H	Cl	CO0Me	Ms	96 ·
	i-Pr		C1	COOMe	Ms	920
	i-Pr	Me	C1	COOMe	Ms	H H H H H H H O1
10	i-Pr	C1	CI	COOMe	Ms	Ħ
	i-Pr	CF ₃	C1	COOMe	Ms	H
	i-Pr	0Me	CI	COOMe	Ms	H
	i-Pr	SMe	CI	C00Me	Ms V-C	Ħ
٠.	i-Pr	n T	C1	COOEt .	MeS Y-SO	d n
15	i-Pr	n v	CI	COORE	MeSO	n T
	i-Pr	п	C1	COOEt COOEt	Ys Ys	T.
	i-Pr i-P r	П 17	CI CI	COOEt.	ns Ms	Q18
	i-Pr	II.	CI	COOEt_	. Ms	913
20	i-Pr	H H H H H H	C1	COOEt	Ms	Q4
	i-Pr	H II	CI	COOEt	Ms	<u> </u>
	i-Pr	Ħ	CI	COOEt	Ms	96
	i-Pr	Ħ	CI	COOEt	Ms 2M	922
	i-Pr	Me	CI	COOEt	Ms	H
25	i-Pr	CI	CI	COOEt	· Ms	Ħ
	i-Pr	CF ₃	CI	COOEt	Ms	H
	i-Pr	OMe	C1	COOE ±	Ms	H
	i-Pr	SMe	C1	COOEt	Ms	H
30	i-Pr		- C1	COOCH (CH ₃) ₂	MeS	H H H H H H Q7
	i-Pr	H . H H . H	CI	COOCH (CH ₃) ₂	MeS0	H
	i-Pr	H.	CI	COOCH (CH ₃) ₂	Ms	H
	i-Pr	H	CI	COOCH (CH ₃) ₂	Ms	
	i-Pr	H	Cl	COOCH (CH ₃) ₂	Ms	Q12
35	i-Pr	H	C1	COOCH (CH ₃) ₂	Ms	<u>0</u> 2
	i-Pr	H	CI	COOCH (CH ₃) ₂	Ms M-	<u>Q4</u>
	i-Pr	H H	CI	COOCH (CH ₃) _z	Ms Ma	95 96_
	i-Pr	H	C1	COOCH (CH ₃) ₂ COOCH (CH ₃) ₂	Ms Ms	Q17
40	i-Pr		C1	COOCH (CH ₃) ₂	ds S	H AIL
	i-Pr	Me Cl	CI CI	COOCH (CH ₃) ₂	Ms	H H
	i-Pr			COOCH (CH ₃) ₂	Ms	
	i-Pr i-Pr	CF₃ OMe	C1 C1	COOCH (CH ₃) ₂	Ms	H H . H H
10	i-Pr	SMe	CI	COOCH (CH ₃) z	Ms	Ä
45	i-Pr		CI	COOMe	. CI	H
	i-Pr	H II	CI	COOMe	CI	<u>0</u> 1
	i-Pr	H H H	C1	COOMe	Ci	92
			U1			

	A	В	X	Y	Z	Q.
5	i-Pr	нннннннннннннн	C1	C00Me	Cl	Q3
	i-Pr	Н	CI	COOEt	CI	H
	i-Pr i-Pr	<u>п</u>	CI	COOEt	Cl	Q1
10	i-Pr	H H	C1 C1	COOEt COOEt	CI Cl	92
	i-Pr	Ħ	CI	COOCH (CH ₃) ₂	C1 -	a en
	i-Pr	Ħ	CI	COOCH (CH ₃) 2	CI	93 H 91
	i-Pr	H	CI	COOCH (CH ₃) z	CI	92
15	i-Pr	· H	C1	COOCH (CH ₃) ₂	C1	92 93 H H H
	i-Pr	H	C1	CON (CH ₃) z	MeS	Ħ
	i-Pr	H	CI	CON (CH ₃) z	MeS0	H
	i-Pr i-Pr	H	CI	CON (CH ₃) ₂	Ms	H
	i-Pr	п	C1 C1	CON (CH ₂) ₂	. Ms	Q1
20	i-Pr	Ħ	CI	CON (CH ₃) _z CON (CH ₃) _z	Ms Ms	918 913
	i-Pr	Ħ	CI	CON (CH ₃) ₂	ns Ns	Q4
	i-Pr	H.	CI	CON (CH ₂) z	Ms	25
	i-Pr	Ĥ	CI	CON (CH ₂) z	Ms	96
25	i-Pr		C1	CON (CH ₃) ₂	Ms	922
	i-Pr	Me	C1	CON (CH ₃) ₂	Ms	
	i-Pr	C1	C1	CON (CH ₃) z	Ms	Ħ
	i-Pr	CF ₃	CI	CON (CH ₃) ₂	Ms	H H H
30	i-Pr i-Pr	OMe SM-	. C1	CON (CH ₃) ₂	Ms	H
	i-Pr	SMe	CI CI	CON (CH ₃) ₂	Ms C1	<u>t</u>
	i-Pr	H	C1	CON (CH ₃) z CON (CH ₃) z	C1 C1	. 01
	i-Pr	Ĥ	CI	CON (CH ₃) 2	či	92
35	i-Pr	H	Cī	CON (CH ₃) ₂	Ci	93
	i-Pr	Н Н Н Н Н	CI	COOC4H9	Ms	H
	i-Pr	H	C1	COOC ₄ H ₉	CI	H H H H
	i-Pr	H H	CI	COOCH ₂ CH (CH ₃) ₂	Ms	Ħ
40	i-Pr	H	CI	COOCH ₂ CH (CH ₃) ₂	Ç1	H
	i-Pr	H	C1	COOCH (CH ₃) C ₂ H ₃	Ms	n v
	i-Pr i-Pr	H H	CI	COOCH (CH ₃) C ₂ H ₃ COOC (CH ₃) ₃	CI Wa	
	i-Pr	H	CI Cl	z (EH2) 2000	Ms Cl	H H
	i-Pr	Ħ	CI	CONHMe	Ms	Ä
45	i-Pr	·Ħ	CI	CONHMe	ĊĨ	H
	i-Pr	H	CĪ	CONHEL	Ms	H
	i-Pr	Н .	Cl	CONHEt	C1	Ħ
				44 .		

0 282 944

5	_ <u>A</u>	В	X	Y	. Z	Q
·	i-P r i-Pr	H H H	C1 C1	CONHCH (CH ₃) ₂ CONHCH (CH ₃) ₂	Ms C1	Ħ
	i-Pr i-Pr	H H	CI	CONHC (CH ₃) ₂	Ms	нининнинин
10	i-P r	H	CI CI	CONHC (CH ₃) ₃	CI Ms	H
	i-Pr i-Pr	H H	CI CI	CONHC4H4 CONHCH2CH(CH3)2	CI	Ħ
	i-Pr	H	CI	CONHCH2CH(CH3)2	Ms Cl	H H
15	i-Pr i-Pr	H H	CI CI	CONHCH (CH ₃) C ₂ H ₅ CONHCH (CH ₃) C ₂ H ₅	Ms Cl	H
	i-Pr i-Pr	H H	CI CI	CONEtz	Ms	Ħ
	i-Pr	H	C1	CONEtz CON (CH(CH ₃)z]z	CI Ms	H
20	i-Pr i-Pr	H H H	CI CI	CON (CH(CH ₃) ₂) ₂ Y1	C1 Ms	H H
	i-Pr i-Pr	Ħ	C1 C1	YI	Cl	H
25	i-Pr	H H H H H	C1	Y2 Y2	Ms Cl	H
20	i-Pr i-Pr	H H	CI CI	Y3 Y3	Ms Cl	H H
	i-Pr i-Pr	H	CI C1	COOPh	Ms	H
30	i-Pr	Ħ	Cl	COOPh COOCH₂Ph	CI Ns	H H
	i-Pr i-Pr	H H	CI CI	COOCH ₂ Ph COOCH ₂ CH=CH ₂	C1 Ms	H
	i-P r i-P r	H H	CI CI	COOCH ₂ CH=CH ₂	CI	H
35	i-P r	H ·	CI	$COOCH_2C \equiv CH$ $COOCH_2C \equiv CH$	Ms Cl	H H
	i-Pr i-Pr	H H	CI CI	C (0) SMe C (0) SMe	Ms CI	H H
	i-Pr i-Pr	H H	C1 C1	C(0) SEt C(0) SEt	Ms	H
40	i-Pr	H	C1	C(0) SCH (CH ₃) _z	CI Ms	H H
	i-Pr i-Pr	H H	CI CI	C (0) SCH (CH ₃) ₂ C (0) SC ₃ H ₇	CI Ms	H H
45	i-Pr i-Pr	H H	CI CI	C(0)SC3H7	C1	H
45	i-Pr	H	· CI	C (S) 0Me C (S) 0Me	Ms · Cl	H H
	i-Pr i-Pr	H H	CI CI	C(S)0Et C(S)0Et	Ms CI	H H

50

5	A	В	X	Y	Z	ę,
•	i-Pr	H	C1	C(S)OCH(CH ₃) _z	Иs	H
	i-Pr	H	C1	C(S)OCH(CH ₃) ₂	C1	H .
	i-Pr	H	CI	C(S)SC ₃ H ₇	Ms	ннининниннин
10	i-Pr	H	C1	C(S)SC ₃ H ₇	C1	Ħ
10	i-Pr	H	C1	C(S)SMe	Ms	H
	i-Pr	H	CI	C(S)SMe	C1	H
	i-Pr	H	C1	. C(S) SEt	Ms	H
	i-Pr	H	Cl	. C(S) SEt	C1	H
15	i-Pr	Н	C1	C(S)SCH(CH ₃) _z	Ms	H
	i-Pr	H	C1	C(S)SCH(CH ₃) _z	C1	H
	i-Pr	H	C1	C(S)SC ₃ H ₇	Ms	H
	i-Pr	H	C1	C(S)SC3H7	C1	H
	i-Pr	H	Иe	C00Me	MeS	H
20	i-Pr	H	Мe	C00Me	MeS0	H
	i-Pr	H	Ме	C00Me	Ms	H
	i-Pr	H	Мe	C00Me	Ms	Q1
	i-Pr	H	Me -	· COOMe	Ms	92
25	i-Pr	H	Мe	· COOMe	Ms	93 ·
	i-Pr	H	Мe	C00Me	Ms	94
	i-Pr	нннининниннинниннин	Мe	C00Me	Ms.	95
	i-Pr	H	Мe	C00Me	Ms	96
	i-Pr		Me .	COOMe	Ms	920
30	i-Pr	Иe	Ме	COOMe	Ms	H
	i-Pr	<u>C1</u>	Me	COOMe	Ms	H
	i-Pr	CF₃	Me	COOMe	Ms	H
	i-Pr	0Me	Me	C00Me	Ms	H
35	i-P -	SMe	Me ·	C00Me	Ms	H
•	i-Pr	H	Ме	COOEt	MeS	H H H H H
	i-Pr i <i>=</i> Pr	H H H	Ме	COOEt	MeSO	n n
	i-Pr	П В	Ме	COOEt	Ms Ma	п Q 1
	i-Pr	П U	Me	COOEt	Ms Ms	Q18
40	i-Fr	H H	Ме	COOEt	en ZM	Q13
	i-Pr	n H	Me Ma	COOEt	ns Ms	Q4
	i-Pr		Me	COOEt		Q 5
	i-Pr	H H	Me Me	COOEt	Ms Ms	45
45	i-Pr	Н	Me	COOEt	ns Ms	922
40	i-Pr	n Me	Me Ma	·COOEt	ns Ms	H
	i-Fr	CI	Me Me	COOEt COOEt	ns Ms	H
	i-Pr	CF ₃	ne Me	COOEt	en en	H
	1-11	41, 3	ine .	COUEL	1177	

						
5	<u>A</u>	B	X	Y	Z	Q
	i-Pr	0Me	Ме	COOEt	Ms	Н
	i-Pr i-Pr	SMe H	Me Me	COOEt	Ms	Ħ
	i-Pr		Me	COOCH (CH ₃) ₂ COOCH (CH ₃) ₂	MeS	H H H H
10	i-Pr	H	Me	COOCH (CH ₃) ₂	MeSO Ms	#
	i-Pr	H	Me	COOCH (CH ₃) z	ns Ms	от 97
	i-Pr i-Pr	H	Me	COOCH (CH ₃) _z	Ms	Q12
	i-Pr	<u>п</u>	Me Me	COOCH (CH ₂) ₂	Ms	бЭ
15	i-Pr	Ħ	ne Me	COOCH (CH ₃) ₂ COOCH (CH ₃) ₂	Ms	. 04
	i-Pr	H	Йe	COOCH (CH ₃) ₂	Ms Ms	95 96
	i-Pr		Иe	COOCH (CH ₃) ₂	Ms	Q17
20	i-Pr i-Pr	Me	Ме	COOCH (CH ₃) ₂	Ms	H
	i-Pr	CI CF₃	Ие Ие	COOCH (CH ₃) ₂	Ms	H H H
	i-Pr	0Me	ne Me	COOCH (CH ₃) ₂ COOCH (CH ₃) ₂	· Ms	H
	i-Pr	SMe	Йe	COOCH (CH ₃) z	Ms Ms	н Н
25	i-Pr	H	Иe	CO0Me	Ci	H
٠.	i-Pr i-Pr	H	Йe	C00Me	· CI	Qi
	i-Pr	H H H . H	Me Me	COOMe COOMe	C1	92
	i-Pr	. Ħ	lie	COORE	C1 C1	93 H
30	i-Pr	Ħ	Me	COOEt	C1	Q1
	i-Pr i-Pr	H	Me	COOEt	CI .	92
	i-Pr	n H	Me Me	COOEt	C1	e3
	i-P r	H H H H	Ме	COOCH (CH ₂) ₂ COOCH (CH ₂) ₂	CI CI	H
35	i-Pr	H H	Мe	COOCH (CH ₃) z	CI	91 92
	i-Pr i-Pr	H	Иe	COOCH (CH ₃) z	CI	<u> </u>
	i-Pr	H H	Me Me	CON (CH ₃) z	MeS	H
40	i-Pr	H	ne Me	CON (CH ₃) ₂ CON (CH ₃) ₂	MeSO Ms	H H H Q1
40	i-Pr	H	Ме	CON (CH ₃) _z	ns Ms	п 07
	i-Pr	H	Мe	CON (CH ₃) _z	Ms	<u> </u>
	i-Pr i-Pr	H	Me	CON (CH ₃) ₂	Ms	Q13
45	i-Pr	H H	Me Me	CON (CH ₃) ₂	Ms	Q4.
	i-Pr	Ħ	ne Me	CON (CH ₃) ₂ CON (CH ₃) ₂	Ms Ms	95 96
	i-Pr	H	Ме	CON (CH ₃) _z	ns Ms	Q22
	i-Pr	Ме	Ме	CON (CH ₃) z	Ms	H
		No.				

0 282 944

	A	В	Х	Y	Z	Q
5	i-Pr	Cl	Иe	CON (CH ₃) z	Ms	
	i-Pr	CF3	Me	z (EED) NOO	Ms	H
	i-Pr	0Me	Me	CON (CH ₃) ₂	ns Ms	H H H
	i-Pr	SMe	Ме	CON (CH3) 2		Щ
10	i-Pr	н	Ме	CON (CH ₃) ₂	Ms C	H
	i-Pr	ਜ -	Me	CON (CII)	C1	
	i-Pr	H H H H	ne Me	CON (CH ₃) ₂	C1	Q1
	i-Pr	ä	Me	CON (CH ₃) ₂	Cl	92
	i-Pr	Ħ	ne Me	CON (CH ₃) ₂	CI	g3
15	i-Pr	Ħ	ne Me	C00C4H,	Ms	H
	i-Pr	H		COOCAH,	C1	H
	i-Pr	Д T	Ме	COOCH ₂ CH (CH ₃) ₂	Ms	H
	i-Pr	H	Ме	COOCH CH (CH 3) z	Cl	Ħ
	i-Pr	<u>n</u>	Ме	COOCH (CH3) C2H5	Ms	H
20		<u>n</u>	Ме	COOCH (CH ₃) C ₂ H ₅	CI	H
	i-Pr	н .	Мe	COOC (CH ₃) 3	Ms	H H H H H
	i-Pr	. н	Me	COOC (CH ₃) 3	CI	H H
	i-Pr		Иe	CONHMe	Ms	H · ·
	i-Pr	н н н н н н	Me	CONHMe	C1	Ħ
25	i-Pr	H	Иe	CONHEt	Ms	H
	i-Pr	H	lie	CONHE t	C1	Ä
	i-Pr	H	Me	CONHCH (CH ₃) ₂	Ms	Ħ
	i-Pr	H	Иe	CONHCH (CH ₃) _z	ĊĨ	H
30	i-Pr	H	Me	CONHC (CH ₃) 3	Ms	Ħ
30	i-Pr	H	. Me	CONHC (CH ₃) 3	Cĩ	Ħ
	i-Pr	H H	Me	CONHC.H.	Ms	# #
	i-Pr	H	Me	CONHC.H.	Ci	II. IT
	i-Pr	H	lle	CONHCH ₂ CH (CH ₃) ₂		Ц
35	i-P r	Ħ	Ме	CONHCH ₂ CH (CH ₃) ₂	Ms Cl	Д. 17.
	i-Pr	H	lle	CONHCH (CH ₃) C ₂ H ₅		<u>п</u>
	i-Pr	H	iie	CONHCH (CH ₃) C ₂ H ₅	Ms	П
	i-Pr	Ä	Me	CONEt ₂	C1	Д
	i-Pr	Ħ	Me	CONET	Ms	н
40	i-Pr	H		CONEtz	Ç1	H H H H H H H H H H
	i-Pr	H	Me Me	CON (CH (CH ₃) ₂) ₂	Ms	H
		••	Me Ma	CON (CH (CH ₃) ₂) ₂	C1	Ħ
	i-Pr ;_D-	II II	Иe	Yl	Ms	H
	i-Pr i-Pr	н Н Н	Me	Yl	C1	H H H
45	i-Pr	H	Me	Y2	Ms	H
	1-1T	H	Me	Y2	C1	H
	i-Pr	H	Ме	Y3	Ms	H
	i-Pr	H	Иe	Y3	CI	H

					·	
5	A	В	X	YY	Z	Q
	i-Pr	H	Ме	COOPh	Ms	н
	i-Pr	H	Мe	COOPh	CI	Ħ
	i-Pr	H	Me	COOCH ₂ Ph	Ms	Ħ
10	i-Pr	H	Иe	COOCH ₂ Ph	CI	Ħ
	i-P r	H	Иe	COOCH _z CH=CH _z	Ms	Ħ
	i-Pr	H	Мe	COOCH ₂ CH=CH ₂	CI.	Ħ
	i-Pr	H	Мe	COOCH ₂ C=CH	Ms	ਸੌ
	i-Pr	H	Иe	HO = 0.5	C1	Ħ
15	i-Pr	H	Иe	C (0) SMe	Ms	Ĥ.
	i-Pr	H	Иe	C(0) SMe	CI	ਸ
	i-Pr	H	Me	C(0)SEt	Ms	Ħ ·
	i-Pr	H H H H	Иe	C(0) SE ±	C1	Ħ
	i-Pr	H	Йe	C(0) SCH(CH ₃) ₂	Ms	H
20	i-Pr	H	Ме	C(0)SCH(CH ₃) _z	C1	ннннннннннн
	i-Pr	H H H H	Иe	C(0)SC ₃ H ₇	Ms	Ħ
	i-Pr	H	Me	C(0)SC ₃ H ₇	C1	Ħ
	i-Pr	H	lie .	C(S) OMe	Ms	Н
25	i-Pr	H	Ne ·	C(S)OMe	C1	H
	i-Pr	H H H H	Иe	C(S)OEt	Ms	H
	i-Pr	H	Ме	C(S)OEt	CI	H H H
	i-Pr	· H	lie	C(S) OCH (CH ₃) z	Ms	H
	i-Pr	H.	Me	C(S)OCH(CH ₃) ₂	C1	H
30	i-Pr	H	. ite	C(S)SC3H7	Ms	H H
	i-Pr	H	Мe	C(S)SC ₃ H ₇	C1	H
	i-Pr	H H H	·Ме	C(S) SMe	Ms	H H H
	i-Pr	Ħ	Нe	C(S)SMe	CI .	H
35	i-Pr	H	Me	C(S)SEt	Ms	H
00	i-Pr	Ħ.	Me	C(S)SEt	CI	H
	i-Pr	H	Ме	C(S)SCH(CH ₃) _z	Ms	\mathbf{H}^{\perp}
	i-Pr	H	Ме	C(S)SCH(CH ₃) ₂	CI	H H
	i-Pr	H	Me	C(S) SC ₃ H ₇	Ms	H ·
40	i-Pr	H	Me	C(S) SC ₃ H ₇	C1	H
	i-Pr	H	0Me	СООМе	MeS	H
	i-Pr	Ħ	0Me	C00Me	MeSO	H
	i-Pr	H	0Me	COOMe	Ms	H
	i-Pr	H	0Me	C00Me	Ms	Ql
45	i-Pr	H .	0Me	. COOMe	Ms	92
	i-Pr	H :	0Me	C00Me	ar.	93
	i-Pr	Ħ	0Me	COOMe	Ms	94
	i-Pr	H	0Me	COOMe	Ms	95

5	A	В	X	Y	Z	Q
	i-Pr	Ħ	0Me	C00Me	Ms	96
	i-Pr	H	0Me	C00Me	Ms	920
	i-Pr	Мe	0Me	C00Me	Ms	H
10	i-Pr	CI	OMe	C00Me	Ms	Ĥ
	i-Pr	CF ₃	0Me	C00Me	Ms	H H H H H
	i-Pr	OMe	· OMe	C00Me	Ms	Ħ
	i-Pr	Sile	0Me	C00Me	lis	Ħ
	i-Pr	Ħ	OMe -	COOE t	MeS	Ħ
15	i-Pr	H	0Me	COOEt	MeSO	H
	i-Pr	H	0Me	COOEt	Ms	<u> </u>
	i-Pr	H	0Me	COOEt	lis	ū 1
	i-Pr	Ħ	0Me	COOEt	Ms	Q18
	i-Pr	H H H H	0Me	COOEt	an Rs	Q13
20	i-Pr	Ħ	0Me	COOEt		
	i-Pr	Ä	0Me	COOEt	Ms Ma	Q4 05
	i-Pr	ਸ	0Me	COOEt	ns V-	95
	i-Pr	Ħ	0Me		Ms	96
	i-Pr i-Pr	Ме	0Me	COOEt	Ms .	922
25	i-Pr	Cl		COOEt	Ms	H
	i_D_	CF ₃	OMe	COOEt	Ms	H
	i-Pr i-Pr i-Pr	OMe	0Me	C00E±	Ms	H
	1-11		0Me	COOEt	Ms	. Н
30	i-Pr	SMe	0Me	COOEt	Ms	. H
50	: D-	П	0Me	COOCH (CH ₃) ₂	MeS	H
	i-Pr	Д	0Me	COOCH (CH ₃) ₂	MeS0	H H H
	i-Pr	H H H H	0Me	COOCH (CH ₃) _z	Ms	H
	i-Pr	H	0Me	COOCH (CH ₃) ₂	Ms	97
35	i-Pr	Ħ	0Me	COOCH (CH ₃) ₂	Ms	012
	i-Pr	H	0Me	COOCH (CH ₃) z	Ms	e 9
	i-Pr	H	0Me	COOCH (CH ₃) ₂	Ms	94
	i-Pr	H	0Me	COOCH (CH ₂) _z	Ms	95
	i-Pr	H	OMe	COOCH (CH ₃) ₂	Ms.	96
40	i-Pr	H	0Me	COOCH (CH ₃) ₂	Ms	917
	i-Pr	Мe	0Me	COOCH (CH ₃) ₂	Ms	H
	i-Pr	CI	0Me	COOCH (CH ₃) ₂	Ms	Ħ
	i-Pr	CF ₃	0Me	COOCH (CH ₃) z	Ms.	Ħ
	i-Pr	0Me	0ăe	COOCH (CH ₂) 2	Ms	H
45	i-Pr	SMe	OMe	COOCH (CH ₃) 2	. Ms	Ħ
	i-Pr	H	0Me	C00Me	CI	Ħ
	i-Pr	Ħ	0Me	COOMe	CI CI	ü1
	i-Pr	H	0Me	COOMe	C1	92
			0176	Coorie	U.L	47
50						

						
5	<u> </u>	B	X	Y	Z	Q
	i-Pr	H	0Me	C00Me	CI	0.0
	i-Pr	H	0Me	COOEt	ČĪ	<u>e</u> 3 H
	i-Pr	<u>H</u>	OMe	COOEt	ČÌ	ü1
10	i-Pr	H	0Me	COOEt	CI	92
70	i-Pr	H	0Me	COOEt	Ci	<u> </u>
	i-Pr	H	0Me	COOCH (CH ₃) ₂	CI	H E
	i-Pr	H	0Me	COOCH (CH ₃) ₂	ČĪ	H Q1
	i-Pr	H	0Me	COOCH (CH _x). _z	ĊĨ	92
15	i-Pr	H H H	0Me	COOCH (CH ₃) ₂	CĪ	23
	i-Pr	H	0Me	CON (CH ₃) _z	MeS	Ħ
	i-Pr	Ħ	OMe	CON (CH ₂) ₂	MeSO	H H
	i-Pr	· <u>H</u>	OMe	CON (CH ₃) z	Ms	Ħ
	i-Pr	H	0Me	CON (CH ₃) z	Ms	<u>ā</u> l
20	i-Pr	H	0Me	CON (CH ₃) z	Ms	. 018
	i-Pr	H	OMe	CON (CH ₃) ₂	Ms	Q13
	i-P r	H	OMe	CON (CH ₃) _z	Ms	94
	i-Pr i-Pr i-Pr	H	OMe	CON (CH ₃) _z	Ms	25
25	i-rr	Ħ	OMe	CON (CH ₃) ₂	Ms	96
	1-77	H	0Me	CON (CH ₃) ₂	Ms	922
	i-Pr	Ме	0Me	CON (CH ₃) _z	Ms	
	i-Pr	CI	0Me	CON (CH ₃) ₂	Ms	Ħ
	i-Pr i-Pr	CF ₃	0Me	CON (CH ₃) ₂	Ms	H
30	i-Pr	OMe ·	0Me	CON (CH ₃) ₂	Ms	H
	i-Pr	SMe	· OMe	CON (CH ₃) ₂	Ms	H H H H H
	i-Pr	H H	OMe	CON (CH ₃) ₂	CI	H
	i-Pr	H	0Me	CON (CH ₃) _z	CI	Ql
35	i-P r	H .	OMe	CON (CH ₃) ₂	CI .	92
55	i-Pr	n u	OMe	CON (CH ₃) ₂	C1	Q3
	i=P r	Н Н Н	OMe	COOC_H-	Ms	H H H H H
	i-Pr	11	0 <u>Ме</u> 0Ме	COOC_H-	CI	H
	i-Pr	H	One OMe	COOCH ₂ CH (CH ₃) ₂	Ms	H
40	i-Pr	H		COOCH ₂ CH (CH ₃) ₂	CI	H
	i-Pr	H	0Me	COOCH (CH3) C2H5	Ms	H
	i-P r	H .	0Me	COOCH (CH3) C2H5	C1	H
	i-Pr	H	OMe OMe	C00C (CH ₃) 3	Мs	H H
45	i-Pr	· Н	one OMe	COOC (CH ³) ³	<u>C</u> I	H
45	i-Pr	H	one OMe	CONHMe	Ms .	H H
	i-Pr	H	one OMe	CONHMe	Ç1	H
	i-Pr	H	one OMe	CONHET	Ms	H ·
			OUE	CONHEt	CI	H

	A	В	Х	Y	Z	Q
5	i-Pr	H	0Me	CONHCH (CH ₃) ₂	м	
	i-Pr	Ħ	0Me	CONTICH (CH ₃) ₂	Ms C1	H
	i-P r	H H H H H H	0Me	CONHC (CH ₃) ₃		
	i-Pr	ਸ	0Me	COMEC (CH ₃) 3	Ms CI	П 17
10	i-Pr	Ħ	0Me	CONHC4H,	CI	п
	i-Pr	Ħ	0Me	CONHC ₄ H ₉	Ms Cl	п
	i-Pr	Ħ	OMe	CONHCH2CH (CH3) 2	Ms	n u
	i-Pr	Ħ	0Me	CONHCH ₂ CH (CH ₃) ₂	C1	<u>п</u> п
	i-Pr	Ħ	OMe	CONHCH (CH ₃) C ₂ H ₅	ăs	п
15	i-Pr	Ħ	0Me	CONHCH (CH ₃) C ₂ H ₅	ns C1	п
	i-Pr	Ħ	OMe	CONEtz	Ms	n T
	i-Pr	Ħ	0Me	CONEt ₂	· C1	II.
	i-Pr	Ħ	0Me	למזו לפשלפש / ז	Ms	п п
20	i-Pr	Ħ	0Me	CON CONTON)	CI	n n
20	i-Pr	Ħ	OMe.	Y1	Ms	Д П
	i-Pr	Ħ	0Me	ŸÌ	CI	д П
	i-Pr	Ħ	0Me	V2	Ms	H H
	i-Pr	Ħ	0Me	Ÿ2 Y2	CI	H T
25	i-Pr	Ħ	OMe	Ÿ3	Ms	H H
	i-Pr	ннининниннин	0Me	¥3	CI	ннининниннинниннин
	i-Pr	Ħ	0Me	COOPh	Ms	Ħ
	i-Pr	Ħ	0Me	COOPh	ĊĨ	H H
	i-Pr	$\widetilde{\mathbf{H}}$	0Me	COOCH ₂ Ph	Ms	Ħ
30	i-Pr	Ħ	0Me	COOCH ₂ Ph	CI	Ħ
	i-Pr	Ħ	· OMe	COOCH z CH=CH z	Ms	H H
	i-Pr	H	0Me	COOCH ₂ CH=CH ₂	ČĨ	Ħ
	i-Pr	H	0Me	$COOCH_2C = CH$	zK	H H H
35	i-Pr	H	OMe	$COOCH_2C = CH$	CI	Ħ
	i-Pr	H	OMe	C(0) SMe	Ms	
	i-Pr	H	0Me	C (0) SMe	CI	H H H H
	i-Pr	H	0Me	C(0)SEt	Ms	H
	i-Pr	H	0Me	C(0) SE t	C1	Ħ
40	i-Pr	H	0Me	$C(0)$ SCH $(CH_3)_2$	Ms	Ħ
	i-Pr	Ħ	OMe	C(0)SCH(CH ₃) _z	C1	Ħ
	i-Pr	H	OMe	C(0) SC ₃ H ₇	Ms	
	i-Pr	H	OMe	C(0) SC ₃ H ₇	CI	H H
45	i-Pr	. Н	OMe	C(S)OMe	Ms	H
	i-Pr	H	0Me	C(S) 0Me	C1	H
	i-Pr	H	OMe	C(S)OEt	Ms	H
	i-Pr	Ħ	0Me	C(S)OEt	CI	H
						

0 282 944

					·	
_	A	В	X	Y	Z	Q
5	i-Pr	H	OMe	C(S)OCH(CH ₃) ₂	Ms	Н
	i-Pr	H H	0Me	C(S) OCH(CH ₃) ₂	CI	ннинниннин
	i-Pr	H	0Me	C(S) SC ₃ H ₇	Ms	H
	i-Pr	H	0Me	C(S)SC3H7	Cl	H
10	i-Pr	H	0Me	C(S) SMe	Ms	H
	i-Pr	H	0Me	C(S) Site	C1	H
	i-Pr	H	0Me	C(S) SEt	Ms	H
	i-Pr	Ħ	0Me	C(S) SEt	CI	H
15	i-Pr	H	0Me	C(S)SCH(CH ₃) ₂	Ms	H
	i-Pr	<u> </u>	0Me	C(S) SCH(CH ₃) ₂	C1	Ħ
	i-Pr i-Pr	п	OMe	C(S) SC ₃ H ₇	Ms	H
	i-Pr	<u>п</u> п	OMe	C(S) SC ₃ H ₇	CI	. H
	i-Pr	п	Br Br	COOMe COOMe	Ms	n T
20	i-Pr	n n	Br .	COORE	CI	H
	i-Pr	. H	Br	COOEt	Ms Cl	T T
	i-Pr	нннннннн	Br .	COOCH (CH ₃) ₂	Ms	п
	i-Pr	Ħ	Br	COOCH (CH ₃) ₂	CI	H H H H H H H H H H
25	i-Pr	· 🛱	Br	CON (CH ₃) ₂	Ms	H
	i-Pr	Ħ	Br	CON (CH ₃) ₂	CI	H
	i-Pr	Ħ	Br	CONHMe	žŠ	Ħ
	i-Pr	H	Br	CONHEt	Ms	Ħ
30	i-Pr	H	. Br	CONHC3H7	Ms	Ħ
30	i-Pr	H	Br	CONHCH (CH ₃) ₂	Ms	Ħ
	i-Pr	H H H H H H	Br	CONHC (CH ₃) ₃	Ms	H
	i-Pr	H	Br	CONEtz	Ms	\mathbf{H}_{\parallel}
	i-Pr	H	Br	CONHC (CH ₃) ₃	Ms	H
35	i-Pr	H	Br	CONHC ₄ H ₉	Ms	H
	i-Pr	H	Br	CONHC ₄ H ₄	Ms	H
	i-Pr	H	Br	CON (CH (CH ₃) ₂) ₂	Ms	H
	i-Pr	H	Br	YI YO	Ms	H
40	i-Pr i-Pr	H	Br	Y2	Ms	H ·
		H H	Br	COOPH	Ms	H H
	i-Pr i-Pr		Br P-	COOCH CH CH	Ms Ma	H .
	i-Pr	H H	Br B-	COOCH C = CH	Ms Mo	H .
	i-Pr	п Н	B r OEt	COOCH ₂ C≡CH	Ms Ms	H .
45	i-Pr	H H	0Et	COOMe COOMe	C1	H
	i-Pr	H	0Et	COORE	Ms	H
	i-Pr	H	0Et	COOEt	C1	H
		. 14		0005 t	01	

5	A	В	X	Y	Z	Q
•	i-Pr	H	0Et	COOCH (CH ₃) _z	Ms	Ħ
	i-Pr	H	0Et	COOCH (CH ₃) ₂	C1	нинининининининининининининини
	i-Pr	H H H	0Et	CON (CH ₃) ₂	Ms	ਸ਼ੌ
	i-Pr	H	OEt	CON (CH ₃) 2	ČĨ	n n
10	i-Pr	Ħ	0Et	CONHMe	Ms	11
	i-Pr	Ħ	0Et	CONHE ±	Ms	n u
	i-Pr	Ħ	0Et	CONHC ₃ H ₇	Ms	<u>n</u>
	i-Pr	Ħ	0Et	CONHCH (CH ₃) ₂	Ms	
5	i-Pr	Ħ	0Et	CONHC (CH ₃) ₃	ns Ms	Д
o o	i-Pr	H H	0Et	CONEtz		<u>п</u>
	i-Pr	Ĥ	0Et		Ms	н
	i-Pr	H	0Et	CONHC (CH ₃) ₃	Ms	Ħ
	i-Pr	H		CONHC H	Ms	Ħ
0		<u>п</u>	0Et	CONHCAH 4	Ms	H
U	i-Pr	H	0Et	CON (CH(CH ₃) ₂) ₂	Ms	H
	i-Pr	H	0Et	ΙΥ	Ms	H
	i-Pr	H H	0Et	Y2	Ms	H
•	i-Pr	H	0E t	COOPh	Ms	H
5	i-Pr	H	0E t	COOCH _z Ph	Ms	H
J	i-Pr	H	0Et	COOCH ₂ CH=CH ₂	Ms	H
	i-Pr	H	0Et	COOCH ₂ C≡CH	Ms	Ħ
	i-Pr	H	OCH (CH ₃) ₂	COOMe	Ms	Ĥ
	i-Pr	H	OCH (CH ₃) ₂	COOMe	CI	Ĥ
0	i-Pr	H H	OCH (CH ₃) ₂	COOE±	Ms	Ħ
•	i-Pr	H	OCH (CH ₃) ₂	COOE±	C1	Ħ
	i-Pr	Ħ	OCH (CH ₃) ₂	COOCH (CH ₃) ₂	Ms	п
	i-Pr	Ĥ	OCH (CH ₃) z	COOCH (CH ₃) ₂	CI	T II
	i-Pr	Ħ	OCH (CH ₃) 2	CON (CH ₃) ₂	Ms	11
5	i-Pr	Ħ	OCH (CH ₃) 2	CON (CH ₃) ₂	CI	11
	i-P r	ü	OCH (CH ₃) 2			Д 77
	i-Pr	<u>n</u>		CONHMe	ns .	<u>п</u>
	i-Pr	H H H H	OCH (CH ₃) ₂	CONHE t	Ms	H
	i-Pr	П П	OCH (CH ₃) ₂	CONHC 3H7	Ms	H
0	i-Pr	П 17	OCH (CH ₃) 2	CONHCH (CH ₃) ₂	Ms	H
		11	OCH (CH ₃) ₂	CONHC (CH ₃) ₃	Ms	H
	i-Pr	H	OCH (CH ₃) ₂	CONEtz	Ms.	H
	i-Pr	H	OCH (CH ₃) ₂	CONHC (CH ₃) ₃	Ms	H
	i-Pr	H H H H	$OCH(CH_3)_2$	CONHC₄H•	Ms	H H H
45	i-Pr	H	OCH (CH ₃) ₂	CONHC4H9	Ms	H
	i-Pr	H	OCH (CH ₃) ₂	CON (CH(CH ₃) ₂) ₂	Ms	H
	i-Pr	H	OCH (CH ₃) ₂	YI	Ms	H
	i-Pr	H	OCH (CH ₃) z	<u> </u>	Ms	Ħ

						
5	<u>A</u>	B	X	Y	\boldsymbol{z}	Q
·	i-Pr	H	OCH (CH ₃) ₂	COOPh	Ms	
	i-Pr	H	$OCH(CH_3)_z$	COOCH 2Ph	Ms	H H H H H
	i-Pr	H	OCH (CH ₃) _z	COOCH 2 CH = CH 2	Ms	<u>п</u>
	i-Pr	. Н	OCH (CH3) z	COOCH ₂ C=CH	Ms	<u></u> .
10	i-Pr	H	CH2OCH3	COOMe	Ms	11. U
	i-Pr	H	CH20CH3	COOMe	CI	11 12
	i-Pr	H H H H H H H	CH2OCH3	COOEt	Ms	. II
	i-Pr	H	CH2OCH3	COOEt	CI	T T
15	i-Pr	H	CH ₂ OCH ₃	COOCH (CH ₃) ₂	Ms	<u>"</u>
	i-Pr	H	CH2OCH3	COOCH (CH ₃) z	ĊĨ	H
	i-Pr	H	CH 20CH 3	CON (CH ₃) ₂	Ms	H H
	i-Pr	H .	CH ₂ OCH ₃	CON (CH ₃) ₂	CI	Ħ
	i-Pr	Ħ	CH 20CH 3	CONHMe	Ms	H .
20	i-Pr	<u>H</u>	CH20CH2	CONHEt	Ms	ਸ
•	i-Pr	H	CH2OCH3	- CONHCaH7	Ms	H H H H H
	i-Pr	<u>H</u>	CHzOCH3	CONHCH (CH ₃) ₂	Ms	. H
	i-Pr i-Pr	Ħ	CH 20CH 3	CONHC (CH ₃) ₃	Ms	Ħ
25	i-Pr	ннннннн	CH 20CH 3	CONEtz	Ms	Ħ
20	i-Fr	H	CH2OCH3	CONHC (CH ₃) ₃	Ms	Ħ
	i-Pr	п	CH2OCH3	CONHC_H,	Ms	Ħ
	i-Pr	<u>1</u>	CH ₂ OCH ₃	CONHC 4H 4	Ms	Ħ
	i-Pr	п Н	CH ₂ OCH ₃	CON (CH(CH ₃) ₂) ₂	Ms	Ħ
30	i-Pr	п	CH 20CH 3	ΥĪ	Ms	H
	i-Pr	H H	· CH 20CH 3	¥2_	Ms	Ħ
	i-Pr	H	CH ₂ OCH ₃	COOPh	Ms	H
	i-Pr	H	CH ₂ OCH ₃	COOCH _≥ Ph	Ms	H
35	i-Pr	H	CH 20CH3	COOCH 2CH=CH2	Ms	H
35	Me	H	CH ₂ OCH ₃ . NO ₂	COOCH ₂ C = CH	Мs	H H H H H H H H H H H H H H H H H H H
	Жe	H		COOMe	Ms	H
	Ме	H	NO z NO z	COOEt	Ms	H
	Me	H	1102	COOCH (CH ₃) ₂	Ms	H
40	Йe	H	NO _z NO _z	CONMez	Ms	H
	Me	Ĥ	110 Z	CONEtz	Ms	H
	Me	H	NO z	COOC ₃ H ₇ ·	Ms	H
	Йe	H	NOz NOz	YI	Ms	H H
	йe	H	NO2	. Y2	Ms	<u>H</u>
45	Me	H	NO ₂	. X3	Ms	H H H
	Me	H	NO _z	COOPh	Ms	<u>H</u>
	Me	H	NO _z	COOCH SH	Ms	Н
-		**	WOS.	COOCH ₂ CH=CH ₂	Ms	H

	A	В	Х	Y	Z	
5						
	Me	H H H H	CF ₃ CF ₃ CF ₃	C00Me	Ms	Ħ
	Me Me	п	Cr 3	COOEt	Ms	нннннннннннн
		Щ	Cr 3	COOCH (CH ₃) _z	Ms	H
10	Me	Ħ	CF ₃	CONMez	Ms	H
	Me	Ħ	CF:	CONE t _z	Ms	Ħ ·
	Ме	Ħ	CF ₃	COOC ₃ H ₇	Ms	Ĥ
	Мe	H	CF 3	ΥI	Ms	Ĥ
	Me	H	CF:	¥2	Иs	Ħ
15	Me	H	CF ₃	Y3	Ms	Ħ
	Me	H H H	CF 3	COOPh	2M	Ħ
	Me	H	CF ₃	COOCH ₂ Ph	Ms	Ħ
	Мe	H	CF ₃	COOCH 2CH=CH2	Ms	Ĥ
	Me	H	CN	COOMe	Ms ·	Ħ
20	Иe	H	CN	COOEt	Ms	Ħ
	Мe	H	C/A	COOCH (CH ₃) ₂	Ms	Ħ
	Me	H	CN	CONMez	Ms	Ħ
	Иe	H .	CN	CONEtz	Ms	· #
05	Мe	H -	CN	· COOC ₃ H ₇	Ms	Ħ
25	Иe	нинининин	C%	YI	Ms	
	Мe	H	CN	<u> </u>	Ms	Ħ
	Иe	Н -	CN	Y3	Ms	Ä
	Ме	H	CN	COOPh	lis	ਸ
30	Ме	H	C.V	COOCH ₂ Ph	Ms	Ĥ
	Me	H	. СЛ	COOCH 2CH=CH2	Ms	Ä.
	Иe	H	CH = OEt	C00Me	Ms	Ĥ
	Ме	Ħ	CH _z OEt	COOE t	. As	H H H H
	Иe	H	CH ₂ OEt	COOCH (CH ₃) ₂	Ms	Ħ
35	Ме	H	CH zOE t	CONMez	Ms	Ĥ
	lle	H	CH ₂ OEt	CONEtz	Ms	Ħ
	Йe	H	CH _z OE t	COOC ₃ H ₇	Ms	H
	Me _	Ħ	CH zOE t	YI	Ms	Н Н
40	Иe	H	CH ₂ OEt	Y2	Ms	H
70	Ме	H	CH _z OE t	ЕУ	Ms	H
	Йe	H	CH ₂ OEt	COOPh	Ms	
	Ме	H	CH _z OE t	COOCH zPh	Ms	H
	Ме	H	CHzOEt	COOCH 2CH=CH2	Ms	H H H
45	Иe	H	Et	COOMe	Ms	H
	Йe	H	Et	COOEt	Ms	H
	Me	H	Et	COOCH (CH ₃) z	Ms	H
	Иe	H	Et	CONMez	Ms	H

5	A	В	<u> </u>	Y	Z	Q.
	Ме	H	E±	CONEtz	Ms	H
	Мe	H	Et	COOC ₃ H ₇	Ms	Ħ
	Мe	H	Et	Υl	Ms	H
	Me	ннннннннннн	Et	¥2	Ms	Ħ
10	Me	H	Et	<u> </u>	Ms	Ĥ
	Me	H	Et	COOPh	Ms	ਸ
	Me	Ĥ	Et	COOCH _z Ph	e Ms	Ħ
	Ме	Ħ	Et	COOCH 2CH=CH2	Ms	Ħ
15	Me	Ĥ	i-Pr	COOMe	Ms	Ĥ
	Мe	Ĥ	i-Pr	COOEt	Ms	ਜੋ
	Me	Ħ	i-Pr	COOCH (CH ₃) ₂	Ms	Ħ
	Me	Ĥ	i-Pr	CONMez	Ms	Ĥ
	Мe	Ħ	i-Pr	CONEtz	Ms	Ħ
20	Me	Ĥ	i-Pr	COOC ₃ H ₇	Ms	Ħ
	Me	Ħ	i-Pr	YI	Ms	Ħ
	Мe	Ħ	i-Pr	<u> </u>	Ms	Ħ
	Me	Ħ	i-Pr	Ÿ3	· · · · · · · · · · · ·	ннинининнинининнинниннинниннин
	Мe		i-Pr	COOPh	Ms	Ä
25	Me	Ħ	i-Pr	COOCH 2Ph	Ms	Ħ
	Me	H H H	i-Pr	COOCH ₂ CH=CH ₂	Ms	Ĥ
	Мe	H	n-Pr	COOMe	Ms	Ħ
	Me	H	n-Pr	COOEt	Ms	Ħ
30	Me	H H H	n-Pr	COOCH (CH ₃) ₂	Ms	Ħ
	Мe	Ħ	n-Pr	CONMez	Ms	Ĥ
	Мe	H	n-Pr	CONEtz	Ms	H
	Me	H	n-Pr	C00C ₃ H ₇	Ms	Ħ.
	Мe	H	n-Pr	Y1	Ms	Ĥ
35	Мe	H	n-Pr	¥2	Ms	H
	_Me	H	n-Pr	Ϋ́З	Ms	H
	Йe	H	n-Pr	COOPh	Ms	H
	Мe	H	n-Pr	COOCH _z Ph	Ms	· H
40	Me	H	n-Pr	COOCH 2CH=CH2	Ms	H
40	Мe	H	I	C00Me	Ms	H
	Мe	H	Ī	COOEt	Ms	H
	Me	H	Ĩ	COOCH (CH ₃) ₂	zK s	H.
	Мe	Ĥ	Ī	CONMez	Ms	H
45	Me	H	Ī	CONEtz	Ms	H. H. H. H. -H
	Мe	Ħ	Ī	COOC ₃ H ₇	Ms	H
	Me	H	Ī	¥1	Ms	-H -
	Me	H	Ī	Y1 Y2	Ms	H
			-			

	A	В	X	Y	Z	Q
5	Me	Н	ĭ	Y3	Ms	
	Me	Ħ	· 7	COOPH	ns Ms	n n
	Мe	H H	ī	COOCH ₂ Ph	ns Ms	нинининининининининининин
	Мe	Ĥ	ī	COOCH 2 CH = CH 2	Ms	<u> </u>
10	Et	H H	ЙОz	COOMe	Ms	<u>D</u>
	Et	Ħ	NO ₂	COORE	ns Ms	<u>п</u>
	Et	Ħ	NO ₂	COOCH (CH ₃) ₂	ns Ms	<u>п</u>
	Et	Ħ	NOz	CONNez	ns Ms	<u>п</u>
	Et	Ĥ	NO ₂	CONEtz	Ms .	n u
15	Et	Ħ	NO _z	C00C ₃ H ₇	Ms Ms	п.
	Et	Ĥ	NO _z .	Y1	Ms	<u> </u>
	Et	ਸ	NOz	¥2	Ms	π π
	Et	Ä	NO ₂	¥3.	is As	<u>n</u>
20	Et	Ĥ	NO _z	COOPH	ns Ms	11 11
	Et	Ħ	NO ₂	COOCH ₂ Ph	ns Ms	п п
	Et	Ħ	NO ₂	COOCH ₂ CH=CH ₂	Ms	<u>п</u>
	Et	Ä	CF ₃	COOMe	ns Ns	Д 17
	Et	Ħ	CF ₃	COORE		. Д
25	Et		CF ₃	COOCH (CH ₃) ₂	Ms .	п
	Et	Ħ	CF ₃	CONMez	ns M-	<u>a</u>
	Ēt ·	Ħ	CF ₃	CONFitz	Ms V-	n
	Et	Ħ	CF ₃		Ms ·	<u> </u>
	Et	Ħ	CF ₃	COOC ₃ H ₇ YI	Ms Y-	11
30	Et	· Ħ	· CF3	¥2	Ms V-	п
•	Et	Ħ	CF ₃	Y3	Ms M-	11
	Et	Ħ	CF ₃	COOPh	Ms Y-	11
	Et	Ë	CF ₃	COOCH ₂ Ph	Ms Ma	H
35	Ēŧ	H ·	CF ₃	COOCH ₂ CH=CH ₂	Ms Y-	H
••	F÷	H	CN 3	COOMe	Ms Ma	H
	Ęt Ét	Ħ	CN	COORE	Ns M-	H H
	Et	H	CN		. Ms	П 11
	Et	H	CN	COOCH (CH ₃) _z	ž.	H
40	Et	H		CONNez) is	H
	Et	H	CA	CONEtz	Ms	H
	Et		CN	C00C3H7	Ms	H
	Et	H H	CN	Y1 Y2	Йs	H
	Et	n H	CN	IZ VO) Ns	H
45	Et	n u	CN	Y3	ÿs	H ·
	Et	H H	CN	COOPH	Ms	H H
	Et	n H	CN CN	COOCH CH CH	Ms	H
-		U.	Ci¥	COOCH 2CH=CH2	Ms	п

0 282 944

Et H CH_OEt COOMe Ms H Et H CH_OEt COOMe Ms H Et H CH_OEt COOME_ Et H CH_OEt COOME_ Et H CH_OEt COOME_ Et H CH_OEt COOME_ Et H CH_OEt CONTE_ Et H CH_OEt CONTE_ Et H CH_OEt COOME_ Et H CH_OEt COOME_ Et H CH_OEt COOME_ Et H CH_OEt Y1 Ms H Et H CH_OEt Y2 Ms H Et H CH_OEt Y3 Ms H Et H CH_OEt COOME_ Et H Et COOME_ SO ET H ET COOME_ ET H ET H ET COOME_ ET H ET H ET COOME_ ET H				··			
Et H CH2OEt COOMe Ms H Et H CH2OEt COOCH(CH2) 2 Ms H Et H CH2OEt CONMe2 Ms H Et H CH2OEt CONMe2 Ms H Et H CH2OEt CONEt2 Ms H Et H CH2OEt COOC4H7 Ms H Et H CH2OEt Y1 Ms H Et H CH2OEt Y2 Ms H Et H CH2OEt Y2 Ms H Et H CH2OEt COOCH2 Ms H Et H Et COOCH Ms H	_	A	Б	X	Y	Z	Q
Et H CH2OEt COOCH(CH2) z Ms H Et H CH2OEt CONMe2 Ms H 10 Et H CH2OEt CONEtz Ms H Et H CH2OEt CONEtz Ms H Et H CH2OEt COOC3H7 Ms H Et H CH2OEt Y1 Ms H Et H CH2OEt Y2 Ms H 15 Et H CH2OEt Y3 Ms H Et H CH2OEt COOCH2Ph Ms H Et H Et COOME Ms H 20 Et H Et COOCH Ms H	3	EŁ	Ħ	CH_OF;	COOMe	Же	Tr.
Et H CH20Et COOCH(CH2) z			Ħ				II II
Et		E±	Ħ		COOCH (CH=) =		<u>п</u>
Et		Et	Ħ	CH-OE t	CONMe-		11 11
Et H CH2OEt COOCaH7 Ms H Et H CH2OEt Y1 Ms H Et H CH2OEt Y2 Ms H Et H CH2OEt Y2 Ms H Et H CH2OEt COOPh Ms H Et H CH2OEt COOCH2Ph Ms H Et H CH2OEt COOCH2CH=CH2 Ms H Et H CH2OEt COOCH2CH=CH2 Ms H Et H Et COOMe Ms H Et H Et COOMe Ms H Et H Et COOMez Ms H Et H Et COOCH4CH3) z Ms H Et H Et COOCH4CH3) z Ms H Et H Et COOCH4Ph Ms H	10	Et	Ħ	CH2OEt			n T
Et H CH20Et Y1 Ms H Et H CH20Et Y2 Ms H Et H CH20Et Y3 Ms H Et H CH20Et COOPh Ms H Et H CH20Et COOCH2Ph Ms H Et H CH20Et COOCH2Ph Ms H Et H Et COOMe Ms H Et H Et COOMe Ms H Et H Et COOMe Ms H Et H Et COOMez Ms H Et H Et CONMez Ms H Et H Et CONMez Ms H Et H Et CONMez Ms H Et H Et COOC3H7 Ms H Et H Et COOCH2CH2CH2 MS H Et H I-PT COOME MS H Et H I-PT COOME MS H Et H I-PT COOME MS H Et H I-PT COOCH2CH2 MS H		E±	Ħ	CH-OEt	C00C-H-		11
Et H CH20Et Y2 Ms H Et H CH20Et Y3 Ms H Et H CH20Et COOPh Ms H Et H CH20Et COOCH2Ph Ms H Et H CH20Et COOCH2Ph Ms H Et H CH20Et COOCH2CH=CH2 Ms H Et H Et COOME Ms H Et H Et COOCH(CH3)2 Ms H Et H Et COOCH(CH3)2 Ms H Et H Et COOC4H7 Ms H Et H Et COOC4H7 Ms H Et H Et Y3 Ms H Et H Et Y3 Ms H Et H Et COOPh Ms H Et H Et COOPh Ms H Et H Et COOCH2Ph Ms H Et H Et COOCH2CH=CH2 Ms H Et H Et COOCH2CH=CH2 Ms H Et H Et COOCH2CH=CH2 Ms H Et H I-Pr COOME Ms H Et H I-Pr COOME Ms H Et H I-Pr COOCH Ms H		Et	Ħ	CH-OEt	V1		H H
Et H CH20Et Y3 Ms H Et H CH20Et COOPh Ms H Et H CH20Et COOCH2Ph Ms H Et H CH20Et COOCH2Ph Ms H Et H CH20Et COOCH2CH=CH2 Ms H Et H Et COOMe Ms H Et H Et COOMe Ms H Et H Et COOMez Ms H Et H Et CONMEz Ms H Et H Et CONEt2 Ms H Et H Et CONC3H7 Ms H Et H Et COOC3H7 Ms H Et H Et COOC3H7 Ms H Et H Et Y3 Ms H Et H Et Y3 Ms H Et H Et COOCH2Ph Ms H Et H I-Pr COOMe Ms H Et H I-Pr COOMe Ms H Et H I-Pr COOCH CH3) 2 Ms H Et H I-Pr COOCH CH3) 2 Ms H Et H I-Pr COOCH CH3) 2 Ms H			Ħ	CH-OEt	Ÿ2		H
Et H CH2OEt COOPh Ms H Et H CH2OEt COOCH2Ph Ms H Et H CH2OEt COOCH2CH=CH2 Ms H Et H Et COOMe Ms H Et H Et COOMe Ms H Et H Et COOCH(CH3)2 Ms H Et H Et COOCH(CH3)2 Ms H Et H Et CONMez Ms H Et H Et CONMez Ms H Et H Et CONC3H7 Ms H Et H Et COOC3H7 Ms H Et H Et Y1 Ms H Et H Et Y2 Ms H Et H Et Y3 Ms H Et H Et COOPh Ms H Et H Et COOCH2Ph Ms H Et H Et COOCH2CH=CH2 Ms H Et H I-Pr COOMe Ms H			H	CH2OEt	Ÿ3	Me	Ħ
Et H CH20Et COOCH2Ph Ms H Et H CH20Et COOCH2CH=CH2 Ms H Et H Et COOME Ms H Et H Et COOCH (CH3) 2 Ms H Et H Et COOCH(CH3) 2 Ms H Et H Et COOCAH7 Ms H Et H Et Y1 Ms H Et H Et Y2 Ms H Et H Et Y3 Ms H Et H Et COOCH2Ph Ms H Et H Et COOCH2CH=CH2 Ms H Et H Et COOCH2CH=CH2 Ms H Et H I-Pr COOME Ms H Et H I-Pr COOCH Ms H BE H BE H I-Pr COOCH CCH3) 2 Ms H Et H I-Pr COOCH(CH3) 2 Ms H Et H I-Pr COOCH Ms H BE H BE H BE H BE COOCH CCH3 2 Ms H BE H BE H BE COOCH CCH3 2 Ms H BE H BE H BE COOCH CCH3 2 Ms H BE H BE H BE COOCH CCH3 2 Ms H BE C	15	Et	Ĥ	CH2OEt	COOPH	Ms	Ħ
Et H CH2OEt COOCH2CH=CH2 Ms H Et H Et COOMe Ms H Et H Et COOCH (CH3) 2 Ms H Et H Et CONME2 Ms H Et H Et CONME2 Ms H Et H Et CONEt2 Ms H Et H Et CONEt2 Ms H Et H Et COOC3H7 Ms H Et H Et Y1 Ms H Et H Et Y2 Ms H Et H Et Y3 Ms H Et H Et COOCH2Ph Ms H Et H Et COOCH2CH=CH2 Ms H Et H Et COOCH2CH=CH2 Ms H Et H I-Pr COOME Ms H Et H I-Pr COOME Ms H Et H I-Pr COOCH CH3) 2 Ms H Et H I-Pr COOCH CH3) 2 Ms H Et H I-Pr COOCH CH3) 2 Ms H		Et	Ħ	CH2OEt	COOCHaPh		Ħ
Et H Et COOMe Ms H Et H Et COOCH (CH ₃) 2 Ms H Et H Et CONMe ₂ Ms H Et H Et CONMe ₂ Ms H Et H Et CONEt ₂ Ms H Et H Et COOC ₃ H ₇ Ms H Et H Et Y1 Ms H Et H Et Y2 Ms H Et H Et Y3 Ms H Et H Et COOCH ₂ CH ₂ CH ₂ Ms H Et H Et COOCH ₂ CH ₃ CH ₂ Ms H Et H Et COOCH ₂ CH ₃ CH ₂ Ms H Et H Et COOCH ₃ CH ₃ CH ₃ Ms H Et H Et COOCH ₃ CH ₃ CH ₃ Ms H Et H i-Pr COOMe Ms H Et H i-Pr COOCH ₃ CH ₃ CH ₃ C Ms H Et H i-Pr COOCH ₃ CH ₃ C Ms H Et H i-Pr COOCH ₃ CH ₃ C Ms H		Et	Ħ	CH20Et	COOCH - CH= CH-		Ħ
Et H Et COOCH (CH ₃) z Ms H Et H Et CONMez Ms H Et H Et CONEtz Ms H Et H Et CONEtz Ms H Et H Et COOC3H7 Ms H Et H Et Y1 Ms H Et H Et Y2 Ms H Et H Et Y3 Ms H Et H Et COOCH CH ₂ Ph Ms H Et H Et COOCH ₂ Ph Ms H Et H Et COOCH ₂ Ph Ms H Et H Et COOCH ₂ CH=CH ₂ Ms H Et H Et COOCH ₂ CH=CH ₂ Ms H Et H i-Pr COOMe Ms H Et H i-Pr COOCH (CH ₃) z Ms H Et H i-Pr COOCH (CH ₃) z Ms H Et H i-Pr COOCH (CH ₃) z Ms H		Et	Ħ	Et			Ĥ
Et H Et COOCH (CH ₃) 2 Ms H Et H Et CONMez Ms H Et H Et CONEtz Ms H Et H Et COOC ₃ H ₇ Ms H Et H Et Y1 Ms H Et H Et Y2 Ms H Et H Et Y3 Ms H Et H Et COOCH ₂ Ph Ms H Et H Et COOCH ₂ Ph Ms H Et H Et COOCH ₂ Ph Ms H Et H Et COOCH ₂ CH=CH ₂ Ms H Et H Et COOCH ₂ CH=CH ₂ Ms H Et H i-Pr COOCH Et H i-Pr COOCH Et H i-Pr COOCH Ms H Et H i-Pr COOCH Ms H Et H i-Pr COOCH Ms H	20		H				Ħ
Et H Et CONMez Ms H Et H Et CONEtz Ms H Et H Et COOC3H7 Ms H Et H Et Y1 Ms H Et H Et Y2 Ms H Et H Et Y3 Ms H Et H Et COOCH2Ph Ms H Et H Et COOCH2Ph Ms H Et H Et COOCH2CH=CH2 Ms H Et H i-Pr COOMe Ms H Et H i-Pr COOCH Ms H		Et	H				- H
Et H Et CONEt2 Ms H Et H Et COOC3H7 Ms H Et H Et Y1 Ms H Et H Et Y2 Ms H Et H Et COOPh Ms H Et H Et COOCH2Ph Ms H Et H Et COOCH2Ph Ms H Et H Et COOCH2CH=CH2 Ms H Et H i-Pr COOMe Ms H Et H i-Pr COOCH Ms H Et H i-Pr COOCH (CH3) 2 Ms H Et H i-Pr CONMe2 Ms H		Et	H -	Et			Ħ
Et H Et COOC3H7 Ms H Et H Et Y1 Ms H Et H Et Y2 Ms H Et H Et COOPh Ms H Et H Et COOCH2Ph Ms H Et H Et COOCH2Ph Ms H Et H Et COOCH2CH=CH2 Ms H Et H i-Pr COOMe Ms H Et H i-Pr COOCH (CH3) 2 Ms H Et H i-Pr COOMe Ms H Et H i-Pr COOCH (CH3) 2 Ms H Et H i-Pr COOMe Ms H		Et	H	Et			Ħ
Et H Et Y1 Ms H Et H Et Y2 Ms H Et H Et Y3 Ms H Et H Et COOPh Ms H Et H Et COOCH_2Ph Ms H Et H Et COOCH_2CH=CH_2 Ms H Et H i-Pr COOMe Ms H Et H i-Pr COOEt Ms H Et H i-Pr COOCH(CH_3) 2 Ms H Et H i-Pr CONMe_2 Ms H S5 Et H i-Pr CONMe_2 Ms H		Et	H		COOC ₃ H ₇		Ħ
Et H Et Y2 Ms H Et H Et Y3 Ms H Et H Et COOPh Ms H Et H Et COOCH ₂ Ph Ms H Et H Et COOCH ₂ CH=CH ₂ Ms H Et H i-Pr COOMe Ms H Et H i-Pr COOCH (CH ₃) ₂ Ms H Et H i-Pr COOCH(CH ₃) ₂ Ms H Et H i-Pr COOCH(CH ₃) ₂ Ms H	25	Et	H	Et	YI		Ħ
Et H Et Y3 Ms H Et H Et COOPh Ms H Et H Et COOCH_2Ph Ms H Et H Et COOCH_2CH=CH_2 Ms H Et H i-Pr COOMe Ms H Et H i-Pr COOEt Ms H Et H i-Pr COOCH(CH_3) 2 Ms H Et H i-Pr COOCH(CH_3) 2 Ms H		Et	H	Et	<u> </u>		Ĥ
Et H Et COOPh Ms H Et H Et COOCH ₂ Ph Ms H Et H Et COOCH ₂ CH=CH ₂ Ms H Et H i-Pr COOMe Ms H Et H i-Pr COOEt Ms H Et H i-Pr COOCH(CH ₃) ₂ Ms H Et H i-Pr COOMe ₂ Ms H		Et	H		У3		H
Et H Et COOCH ₂ Ph Ms H Et H Et COOCH ₂ CH=CH ₂ Ms H Et H i-Pr COOMe Ms H Et H i-Pr COOEt Ms H Et H i-Pr COOCH(CH ₃) ₂ Ms H Et H i-Pr COOCH(CH ₃) ₂ Ms H 35 Et H i-Pr CONMe ₂ Ms H		Et	H		COOPh	Ms	H
Et H Et COOCH ₂ CH=CH ₂ Ms H Et H i-Pr COOMe Ms H Et H i-Pr COOEt Ms H Et H i-Pr COOCH(CH ₃) ₂ Ms H Et H i-Pr CONMe ₂ Ms H 35 Et H i-Pr CONMe ₂ Ms H	30	Et .	H	Et .	COOCH _z Ph	Ms	H
Et H i-Pr COOMe Ms H Et H i-Pr COOEt Ms H Et H i-Pr COOCH(CH ₃) ₂ Ms H 35 Et H i-Pr CONMe ₂ Ms H	•••	Et	• Н	Et	COOCH _z CH=CH _z		H
Et H i-Pr COOEt Ms H Et H i-Pr COOCH(CH ₃) ₂ Ms H 35 Et H i-Pr CONMe ₂ Ms H		Et	H	i-Pr			H
Et H i-Pr $COOCH(CH_3)_2$ Ms H 35 Et H i-Pr $CONMe_2$ Ms H		Et	H				H
35 Et H i-Pr CONMez Ms H		Et	H				H
	35	Et	Н				H
EL II I-FF CONETS IIS II		Et	H	i-Pr	CONEtz	Ms	H
Et H i-Pr COOC ₃ H ₇ Ms H		Et	H		COOC₃H ₇		H
Et H i-Pr Y1 Ms H			H		ΥŢ		H
Et H i-Pr Y2 Ms H	40		H		Y2		H
	40	Et	H		Y3		H
Et H i-Pr COOPh Ms H					COOPh		
Et H i-Pr COOCH ₂ Ph Ms H		Et	H		COOCH ₂ Ph		Η̈́
Et H i-Pr COOCH ₂ Ph Ms H Et H i-Pr COOCH ₂ CH=CH ₂ Ms H Et H n-Pr COOMe Ms H Et H n-Pr COOEt Ms H Et H n-Pr COOCH(CH ₂) ₂ Ms H			Ĥ.		COOCH 2CH=CH2		H
45 Et H n-Pr COOMe Ms H	45		H				H
Et H n-Pr COOEt Ms H			H				н.
							Ħ.
Et H n-Pr CONMe ₂ Ms H	_	22	H	n-Pr	CONMez	MS .	n .

•						
5 -	A	B	X	Y	Z ·	Q
	Et	H	n-Pr	CONEtz	Ms	H
	Et	H .	n-Pr	COOC ₃ H ₇	Ms	Ĥ
	Et	H	n-Pr	Y1	Ms	H
	Et	H	a-Pr	Ÿ2	Ms	Ħ
10	Et	H	n-Pr	<u> </u>	Ms	Ĥ
	Et	Ħ	n-Pr	COOPh	Ms	Ħ
	Et	Ħ	n-Pr	COOCH _z Ph	Ms	Ħ
	Et	Ĥ	n-P r	COOCH ₂ CH=CH ₂	Ms	Ħ
15	Et	Ħ	Ī	COOMe	Ms	Ħ
15	Et	H H H	Ť	COOEt	Ms	H
	Et	Ħ	Ť	COOCH (CH ₃) ₂	Ms	· #
	Et	Ħ	Ť	CONMez	Ns	H
	Et	Ħ	Î	CONEtz	Ms	H .
20	Et	· #	İ	COOC ₃ H ₇	Ms	Ħ
	Et	Ä	Ť	Y1	. Ms	n
	Et	Ħ	Ĭ	¥2	. Ms	нинининининин
-	Et	п	İ	Y3	en en	H
•	Et	H H H H H H H	Ť.·	COOPh	Ms	H H
25	Et	Ħ	İ	COOCH ₂ Ph	Ms	H H H
	Et	ਸ	Ť	COOCH ₂ CH=CH ₂	Ms	11
	i-Pr	Ħ	NO _z	COOMe	Ms	Ħ
	i-Pr	H H	NO ₂	COORE	Ms	n n
	i-Pr	Ħ	NO _z	COOCH (CH ₃) ₂	Ms	H H
30	i-Pr	Ħ	- NO ₂	CONMez	Ms	H H
	i-Pr	H H H	NOz	CONEt ₂	Ms	H H H H H H H H H H H H H H H H H H H
	i-Pr	Ħ	NO ₂	COOC3H7	Ms	H
	i-Pr	Ħ	NO ₂	Y1	ns Ns	H
35	i-Pr	Ħ	NO _z	¥2.	en en	Ħ
	i-Pr	H .	NO ₂	¥3	Ms	Ħ
	i-Pr	Ħ	NO ₂	COOPH	Ns	Ħ
	i-Pr	H H	NOz	COOCH ₂ Ph	Ms	Ħ
	i-Pr	Ħ	NO ₂	COOCH ₂ CH=CH ₂	zří	Ħ .
40	i-P r	Ħ	CF ₃	COOMe	ns Ns	H
	i-P r	Ħ	CF ₃	COOLE	Ms	Ä
	i-Pr	H	CF ₃	COOCH (CH ₃) _z	Ms	
	i-Pr	H	CF ₃	CONMez	Ms	H H
45	i-Pr	n H	CF ₃	CONEtz	Ms	Ħ
₩	i-Pr	Ħ	CF ₃	CONE 12 COOC3H7	Ms	Ħ
	i-Pr	H	CF 3 CF 3	YI ·	Ms	H
	i-Pr	H.		Y2	ns Ns	Ħ
_	1-11	<u>u</u> .	CF ₃		119	

5	A	В	X	Y	Z	Q
	i-Pr	H	CF 3	Y3	Иs	H
	i-Pr	H	CF 3	COOPh	Ms	Ħ
	i-Pr	H H H H	CF ₃	COOCH 2Ph	Ms	Ħ
10	i-Pr	H	CF ₃	COOCH _z CH=CH _z	Ms ·	Ĥ
	i-Pr	H	CN	C00Me	Ms	Ĥ
	i-Pr	H	. CN	COOE t	Ms	Ĥ
	i-Pr	. Н	CN	COOCH (CH ₃) ₂	Ms	H
	i-Pr	H	, CN	CONMez	Ms	H
15	i-Pr	H	CN	CONEtz	Ms	H
	i-Pr	H	CN	COOC ₃ H ₇	Ms	H
	i-Pr	H	CX	Y1	Ms	H
	i-Pr	H	CN	¥2	Ms	H
	i-Pr	Ħ	CN	Y3	Ms .	H
20	i-Pr	н н н н н н	CA	COOPh	Ms	H
	i-Pr	H	CN	COOCH 2Ph	Ms	H
	i-Pr	H H	CN	COOCH _z CH=CH _z	Ms	H
	i-P r	п	CH ₂ OEt	COOMe	Ms	H
25	i-Pr	11 - T	CH ₂ OEt	COOEt	Ms	H
	i-Pr i-Pr	H H H H	CH ₂ 0Et	COOCH (CH ₃) ₂	Ms	H
	i-Pr	п	CH _z 0Et	CONMez	Ms	H
	i-Pr	n n	CH ₂ OEt	CONEt ₂	Ms	H
	i-Pr	n u	CH ₂ 0Et	COOC ₃ H ₇	Ms	H
30	i-Pr	Ħ	CH=OEt CH=OEt	YI	Ms	出
	i-Pr	H	CH ₂ OEt	Y2 Y3	Ms M-	<u>п</u>
	i-Pr	Ħ	CH ₂ OEt	COOPh	Ms Ms	нннинининниннинниннинниннинниннин
	i-Pr	Ħ	- CH ₂ OEt	COOCH ₂ Ph	ns Ms	П U
35	i-Pr	Ħ	CHzOEt	COOCH ₂ CH=CH ₂	Ms	H.
	i-Pr	Ĥ	Et	COOMe	Ms	H
	i=Pr	Ħ	Et	COOEt	ak S	Ħ
	i-Pr	H	Et	COOCH (CH ₃) ₂	Ms	Ħ
40	i-Pr	H	Et	CONMez	Ms	Ħ
40	i-Pr	H	Et	CONEtz	Ms	Ĥ
	i-Pr	Ħ	Et	COOC 3H7	žľs.	H
	i-Pr	H	Et	Y1	Ms	\mathbf{H}^{\cdot}
	i-Pr	H	Et	Y1 Y2	Ms	H H
45	i-Pr	H	Et	Y3	Ms	H
	i-Pr	H	Et	COOPh	· Ms	H
	i-Pr	H	Et	COOCH ₂ Ph -	Ms	H
_	i-Pr	H	Et	COOCH ₂ CH=CH ₂	Ms	H

0 282 944

5	A	В	X	<u>Y</u>	Z	. Q
,	i-Pr	H	i-Pr	COOMe	Ms	H
	i-Pr	Ä	i-Pr	COOEt	Ms	д П
	i-Pr	អ៊	i-Pr	COOCH (CH ₃) ₂	ns Ns	11
	i-Pr	Ħ	i-Pr	CONMez	Ms	11
0	i-Pr	H H H	i-P r	CONEt _z	is As	11
	i-Pr	Ħ	i-Pr	COOC ₃ H ₇	ns Xs	- II
	i-Pr	Ħ	i-Pr	Y1	ns Ns	n. Tř
	i-Pr	H H	i-Pr	¥2	Ms .	<u>п</u>
	i-Pr	Ħ	i-Pr	Y3	ns Ns	n U
5	i-P r	n	i-Pr	COOPh	ns Ns	u u
	i-Pr	<u>u</u>	i-Pr	COOCH ₂ Ph	ns Ns	п
	i-Pr	<u> </u>	i-Pr			n n
	i-Pr	нннининниннинниннин	n-Pr	COOCH _z CH=CH _z	Ms Ma	
0	i-Pr	п		COOMe	Ms Ma	Д 17
U	i-Pr	<u>п</u>	n-Pr	COOEt	ns V-	<u>п</u> • 17
		<u>п</u>	n-Pr	COOCH (CH ₃) ₂	Ms	n
	i-Pr	# #	n-Pr	CONMe:	Ms	H
	i-Pr	H	n-Pr	CONE t2) is	Ħ.
!5	i-Pr	Ħ	n-Pr	COOC ₃ H ₇	Ms	H
	i-Pr	H	n-Pr	Yl	Ms	H H H H H H
	i-Pr	H	n-Pr	<u>Y2</u>	lis	H
	i-Pr	Ħ.	n-Pr	Y3	Ms	H
	i-Pr	<u>H</u> .	n-Pr	COOPh	Ms	H
30	i-Pr	Ħ	n-Pr	COOCH ₂ Ph	Ms	H
	i-Pr	H	n-Pr	COOCH _z CH=CH _z	ak	H
	i-Pr	H	I	C00Me	Ms	H
	i-Pr	H	I ·	COOEt	Иs	H H H
	i-Pr	H	I	COOCH (CH ₃) ₂	XIS .	H
35	i-Pr	H	I	CONMe _z	zK	H
	i-Pr	H	Ι	CONEtz	Ms.	H
	i-Pr	H	I	COOC ₃ H ₇	Ms	H
	i-Pr	H	I	Y1	Ms	H
	i-Pr	H	I	¥2	Ms	H H
40	i-Pr	H	I	¥3	. Ms	Ħ
	i-Pr	H	Ĩ	COOPh	Ms	H
	i-Pr		Ī	COOCH ₂ Ph	ZK	H
	i-Pr	Ħ	Ī	COOCH 2CH = CH 2	Ms	H
45	allyi	H H H H	NOz	COOMe	Ms	H
~	allyi	Ħ	NO _z	COOEt	Ms	H
	allyi	H	NO ₂	COOCH (CH ₃) _z	Ms.	Ħ
	allyi	H	NO _z	CONMez	Ms	Ĥ

						
5	A	В	X	Y	Z	Q
	allyl	H	NOz	CONEtz	Ms	H
	allyl	нннннннн	NOz	COOC ₃ H ₇	Ms	ਸੰ
	allyl	H	NOz	Yl	Ms	Ħ
10	allyl	H	NOz	YŽ	Ms	Ħ
	allyi	H	NOz	Y3	Ms	Ħ
	allyl	H	NO z	COOPH	Ms	Ħ
	allyi	H	NO ₂	COOCH ₂Ph	Ms	Ħ
	allyi	H	NO z	COOCH ₂ CH=CH ₂	Ms	Ħ
15	allyl	H	CF ₃	C00Me	Ms	H
	allyl	H	CF 3	C00Et	Ms	Ĥ
	allyi	H	CF 3	COOCH (CH ₃) ₂	Ms	H.
	allyl	H	CF ₃	CONMez	Ms	H
20	allyl	H	CF₃	CONE t2	Ms	H
	allyi	H	CF ₃	C00C ₃ H ₇	Ms	H
	allyl	<u>H</u> .	CF =	YI	Ms	H
	allyi	H H - H	CF 3	Y2	Ms	H
	allyi	÷ H	CF3	Y3	Ms	нннинниннинниннин
25	allyl	H	CF3	COOPh	Ms	H
	allyl	H	CF 3	COOCH ₂ Ph	Ms	H
	allyl	H H H H	CF₃	COOCH ₂ CH=CH ₂	Ms	H ·
	allyi	H	CN	COOMe ·	Ms	H
	allyl	H	СХ	COOEt	Ms	H
30	allyl	H	CN	COOCH (CH ₃) ₂	Ms	H
	allyi	H H	. CN	COMMez	Ms	H
	allyl	H H	CN	CONEtz	Ms	H
	allyl allyl	П !Т	CN	COOC ₃ H ₇	Ms	H
35	allyi	н	СЛ	<u>Y1</u>	Ms	H
	allyi	H H	CX	Y2	Ms	H
	allyi	п Н	CN	¥3	Ms	H
	allyl	n u	CN .	COOPh	Ms	H
	allyl	H H	CN.	COOCH ₂ Ph	Ms	Ħ
40	allyl	H	CH	COOCH 2CH=CH2	Ms	Ħ
	allyl	n H	CH ₂ OEt	COOMe	Ms	H
	allyi		CH = OE t	COOEt	Ms	H
	allyl	H H	CH ₂ OEt	COOCH (CH ₂) _z	Ms	H H .
45	allyi	H	CH ₂ OEt	CONMez	_ Ms	Н -
	allyi	п Н	CH ₂ OEt	CONEtz	Ms	H
	allyi	n n	CH ₂ OEt	C00C ₃ H ₇	Ms	H H
	allyl	H H	CH _z OE t	- Y1	Ms M-	H.
	/-	ц.,	CHzOEt	Y2	Ms Ms	H

5	A	В	X	Y	Z	Q
J	allyl	H	CH _z OE t	Y3	Иs	D.
	allyi	H	CH _z OE t	COOPh	Ms	<u>п</u>
	allyl	H	CHzOEt	COOCH ₂ Ph	Ms	n U
	allyi	H	CHzOEt	COOCH ₂ CH=CH ₂	Ms	Ω 17
10	allyi	H	Et	COOMe	Ms	<u>п</u>
	allyl	H	Et	COOEt	Ms	П 17
	allyi	H	Et	COOCH (CH ₃) ₂	Ms	<u>п</u>
	allyl	H	Et	CONMez	Ms	n n
15	allyi	H	Et	CONEtz	Ms	<u>п</u>
	allyl	H	Et	COOC ₃ H ₇	Ms	u u
	allyl	H H H H	Et	Y1	Ns	II.
	allyi	H	Et	ŶŹ	Ms	H T
	allyl	H	Et	<u> </u>	Ms	Ħ
20	allyi	H H H	Et	COOPH	Ms	Ħ
	allyl	H	Et	COOCH ₂ Ph	≈ Ms	H
	allyl	H	Et	COOCH _z CH=CH _z	Ms	Ħ
	allyl	H	i-Pr	COOMe	is Ns	Ħ
05	allyi	H	i-Pr	COOEt	. Ms	нинининининининининининининини
25	allyl	H	i-Pr	COOCH (CH ₃) ₂	zK	H
	allyi	H H H H H H	i-Pr	CONMez	Ms	Ħ
	allyl	H	i-Pr	CONEtz	zK	Ħ
	allyl	H	i-Pr	C00C ₃ H ₇	Ms	Ħ
30	allyl	H	i-Pr	Y1	Ms	ਸ
	allyi	H	·i-Pr	<u> </u>	Ms	ਸ
	allyi	H	i-Pr	<u> </u>	Ms	. H
	allyl	H	i-Pr	COOPh	Ms	ਸ਼ੋ
	allyl	H	i-Pr	COOCH ₂ Ph	Ms .	Ħ
35	allyi	H	i-Pr	COOCH z CH=CH z	Ms	H
	allyl	H	n-Pr	COOMe	Ms	H
	allyl	H	.n-Pr	COOEt	Ms	Ħ
	allyl	H .	n-Pr	COOCH (CH ₃) ₂	Ms	H H. H H
40	allyl	H	n-Pr	CONMez	Ms	H
	allyl	H	n-Pr	CONEtz	Ms	H
	allyi	H	n-Pr	COOC ₃ H ₇	Ms	H
	allyl	H	n-Pr	YI	· Ms	H ·
	allyl	Ħ	n-Pr	Y1 Y2	Ms	H H
45	allyl	Ħ	n-Pr	Y3	Ms	H
	allyi	H	n-Pr	COOPh	Ms	H
	allyl	Ħ	n-Pr	COOCH _z Ph	Ms	H
	allyi	H	n-Pr	COOCH _z CH=CH _z	Ms	H

0 282 944

	<u>A</u>	В	Х	Y	Z	Q
5	allyl	H	I	COOMe	Ms	H
	allyl	H	I	COOEt	Xs	
	allyl	H	Ĭ	COOCH (CH ₃) ₂	Ms	H H H
	allyl	H H H	I	CONMez	Ms	<u> </u>
	allyl	H	I	CONEtz	Ms	n H
10	ailyl		I	COOC ₃ H ₇	Ms	T.
	allyl	H	I	Y1	Ms	H H H
	allyI	H	I	Ŷ 2	iis Ms	<u>a</u>
	allyl	H	I	<u> </u>	ns Ns	H
	allyl .	H	I	COOPH	Ms	H
15	allyl	H	I	COOCH 2Ph	Ms	11.
	allyl	H	I	COOCH ₂ CH=CH ₂	Ms	H
	allyl	H	Ме	COOH	Ms	n T
	allyl	H	C1	COOH	Ms	. <u>Н</u> Н
20	Йe	H	Me	COOH	řis Žis	H
	Me	H	Cl	COOH	Ms	H
	Et	H	Me	COOH	Ms	H
	Et	H	CI	COOH	Ms	H
	i-Pr	H	Me	СООН	Ms	H
25	i-Pr	H	C1	COOH	Ms	H

. 30 -

35

an.

45

50

	A	В	X	Y	Z	Q.
5	Мe	H	C00Me	CH2OCH2CH=CH2		
	Мe	Ħ	COOMe	CH ₂ OCH ₂ C=CH	Ms	нинининининнин
	Мe	H H H	COOMe	Ch2OCh2C = Ch SCH3	Ms	H
	Me	Ħ	COOMe	2011 2011	Ms	H
10	Мe	ü	COOMe	CH ₂ OH	Ms	H
	Et	H H	COOMe	CH ₂ SCH ₃	Ms	H
	Et	H	COOMe	CH ₂ OCH ₂ CH=CH ₂	Ms	H
	Et	17		CH ₂ OCH ₂ C≡CH	Ms	H
	Et	11	COOMe	SCH ₃	Ms	H
15	Et	17	COOMe	CH ₂ OH	Ms	H
	i-Pr	11	COOMe	CH ₂ SCH ₃	Ms	H
	i-Pr	· EZ	COOMe	CH ₂ OCH ₂ CH=CH ₂	Ns.	H
	i-Pr	<u>п</u>	CO0Me	CH ₂ OCH ₂ C≡CH	zK	H
	i-Pr	<u>п</u>	CO0Me	SCH ₃	Ms	H
20	i-Pr	<u> </u>	CO0Me	CH ₂ OH	Ms	H
		п	CO0Me	CH ₂ SCH ₃	Ms	H
	Me Me	H T	COOE t	CH2OCH2CH=CH2	Ms	H
		n T	COOE t	$CH_zOCH_zC = CH$	Ms	H
05	Me V-	. н	COOE t	SCH ₃	Ms	H
25	lle	ннннныннннын	COOEt	CH ₂ OH	Ms	H
	Ме	Ħ	COOE t	CH ₂ SCH ₃	Ms	ннниннин
•	Et	<u>H</u>	COOE t	CH2OCH2CH=CH2	Ms	H
	Et	H	COOE:	CH ₂ OCH ₂ C≡CH	Ms	Ħ
30	Et	H	COOE t	SCH ₃	Ms	Ĥ
	Et	H	COOE ±	CH ≥OH	Ms	Ĥ
	Et	Ħ	COOEt	CH ₂ SCH ₃	Ms	Ħ
	i-Pr	H	COOE t	CH ₂ OCH ₂ CH=CH ₂	Ms	Ħ
	i-Pr	H	COOE t	$CH_2OCH_2C \equiv CH$	Ms	Ħ
35	i-Pr	H	COOE t	SCH ₃	Ms	Ħ
	i-Pr	H	COOEt	CH _z OH ·	Ms	H
	i-Pr	H	COOE t	CH _z SCH _z	Ms	Ĥ
	Мe	Ħ	Иe	C00Y4	Ms	Ĥ
	Me	H	Ме	C00Y5	Иs	Ħ
40	Иe	H	Me	C00Y6	Ms	H
	Мe	H	Жe	COOCH ₂ CH ₂ CI	Ms	H
	Мe	H	Мe	COOCH ₂ CF ₃	Ms.	
	Me	. H	Me	COOCH ₂ CC1=CH ₂	XIS	H H H H
45	Me	. Н	Ме	COOCH ₂ CH ₂ OCH ₃	Ms	H.
+0	Me	H	Me	COOCH z SCH 3	Ms	H
	Иe	· H	Йe	COOCH ₂ CH ₂ OCH ₂ CH ₂ C1	Ms	Ä
	Me	H	Йe	COOCH ₂ CH ₂ CM ₂ CH ₂ CH ₂ CH ₂ CH ₂ CH ₂ CH ₂ CH ₂ CH	Ms	H
_				10101120113	.,,,	

55

,1

.1

0 282 944

	<u>A</u>	В	X	Y	Z	Q
5	Иe	Ħ	Мe	COCCH ₂ OCH ₂ CH ₂ OCH ₃	М-	
	Йe	H	Ме	COOCH ₂ CH ₂ H ₂ H ₂	Ms V-	H
	Йe	ä	ne Me	COOCH CH CH	Ms	ннининниннин
	Me	H H	ne Me	COOCH 2 CH 2 CN	Ms	H
10	Иe	H		COOCH CH 2NHCH 2	Ms	H
,,	Иe	· 11	Нe	COOCH ₂ CH ₂ OH	Ms	H
	ne Ne	H	Иe	COOCH 2 CH 2 CH 2 NO 2	ils	H
		Ω	Иe	COOY7	Ms	H
	Ме	H	Иe	COOCH ₂ COCH ₃	Ms	H
15	Me	Ħ	Мe	COOCH ₂ CO ₂ CH ₃	Ms	H
	Me	H	Мe	COOCH (CH ₃) COOEt	Ms	H
	Me	Ħ	· Ne	COOCH ₂ CH ₂ OPh	Ms	Ħ
	Me	Ħ	Мe	COOCH _z CH _z OCH _z Ph	Ms	Ħ
	Мe	H	Йe	COOPh-4-CH3	Ms	Ħ.
20	Йe	H	Иe	COOPH-4-C1	Ms	Ħ
•	Me	H	Me	COOPh-4-NO2	Ms	ü
	Мe	Ĥ	. Me	COOCH ₂ SiMe ₃	Ms	11
	Me -		Ме	C00X8	Ms	H
	Me	Ħ	Me	COOCH ² 78	Ms	· · · H · · ·
25	Me	H H	Me	COOYS		H H H
	Me	g	Me	C00Y10	Ms	п
	Me	ä	· Me	CONTEO CIT	Ms	ii.
	Me	17		CONTISO 2CH3	Ms.	Ħ
	Иe	n T	Me C1	CONHSO ₂ CF ₃	Ms	Ħ
30	Me	П П	C1	C00Y4_ ·	Иs	H
	Me	П 17	C1	C00Y5	Ms	H
		<u>n</u> .	. CI	C00Y6	Ms	-H
	Ме ·	п.	CI	COOCH ₂ CH ₂ CI	Иs	H
	Me	<u>H</u>	C1	COOCH ₂ CF ₃	Ms	H
35	Me	Ħ.	CI	COOCH ₂ CCl=CH ₂	zĸ	H
	Ме	H	Cl	COOCH ₂ CH ₂ OCH ₃	Ms	H
	fle:	H	CI	COOCH ₂ SCH ₃	Ms	H
•	Me .	H	C1	COOCH ₂ CH ₂ OCH ₂ CH ₂ CI	Ms	H H H
	Me	H	CI	COOCH ₂ CH ₂ OM ₅	Ms	Ħ
40	Me	H	C1	COOCH = OCH = CH = OCH =	zK	Ĥ
	Мe	H	CI	COOCH 2 CH 2 Ms	Ms	Ħ
	Me	H H	ČĪ	COOCH 2CH 2HS	Ms	H
	Me	Ħ	CI	COOCH = CH = NHCH =	iis Is	17 17
	Me	Ħ	CI	ししししれ しュ しゅ ・ ころのではこのはないはでする		H
45	Me	H	CI	COOCH CH CH VO	· Ms	H
	Me .	H		COOCH 2CH 2CH 2NO 2	Ms M-	·П
	Me	H	CI	COOY7	Ms	H
_	116	. 11	CI	COOCH ZCOCH 3	Ms	. Н

5	A	В	Х	Y	Z	Ç.
	Ме	H H H H H H H H H	Cl	COOCH ₂ CO ₂ CH ₃	Ms	H
	Иe	H	C1	COOCH (CH ₃) COOEt	Ms	Ħ
	Мe	H	Cl	COOCH _z CH _z OPh	Ms	Ħ
10	Иe	H	Cl	COOCH ₂ CH ₂ OCH ₂ Ph	Ms	H
7.0	Мe	H	CI ·	COOPH-4-CH3	Ms	H H H H H H H H H H H H H H H H H H H
	Me	H	CI	COOPh-4-C1	Ms	H
	Мe	H	C1	COOPh-4-NO2	Ms	H
	Me	H	CI	COOCH _z SiMe ₃	Ms	Ĥ
15	Мe	H	Cl	COOA8	Ms	Ĥ
	Мe	H	C1	COOCH ₂ Y8	Ms	Ħ
	Me	- Н	C1	COOY9	Ms	H H
	Me	Ħ	C1	C00Y10	Ms	ਸ
	Me	H	C1	CONHSO ₂ CH ₃	Ms	H
20	Мe	Ħ	Cl	CONHSO _z CF ₃	Ms	. Ĥ
	Иe	H	0Me	C00Y4	zK	. Н Н
	Me	H H H H	0Me	COOY5	Ns.	Ħ
	Мe	Ħ	OMe	C00Y6	Ns .	Ē
oe.	Me	H .	0Me	COOCH ₂ CH ₂ C1	Ns .	Ħ
25	Me	Ħ	0Me	COOCH2CF3	Ms	H H
	Me	Ħ	0Me	COOCH _z CCl=CH _z	Ms	Ħ
	Me	H	0Me	COOCH 2CH 2OCH 3	Ms	Ħ
	. Me	. H	0Me	COOCH ₂ SCH ₃	Ms	Ħ
30	Мe	H	0Me	COOCH ₂ CH ₂ OCH ₂ CH ₂ C1	Ms	Ħ
	Мe	H	· OMe	COOCH _z CH _z OMs	Ms	H
	Мe	H	0Me	COOCH 20CH 2CH 2OCH 3	Ms	H H H
	Мe	H	0Me	ZMsH2CH2CO	Ms	Ħ
	Иe	H	0Me	COOCH 2CH 2CN	ar.	H
35	Мe	H	0Me	COOCH 2 CH 2 NHCH 3	Ms	H
	Мe	H	0Me	COOCH ₂ CH ₂ OH	Ms	8 H H H
	Я́е	H	0Me	COOCH ₂ CH ₂ CH ₂ NO ₂	Ms	H
	Иe	H	0Me	COOY7	ZМ	H
40	Йe	H	0Me	COOCH 2 COCH 3	Ms	H
	Йe	H	0Me	COOCH ₂ CO ₂ CH ₃	Иs	. Н
	Мe	H	0Me	COOCH (CHa) COOEt	Ms	H
	Мe	H	0Me	COOCH ₂ CH ₂ OPh	Жs	• Н
	Йe	H	0Me	COOCH ₂ CH ₂ OCH ₂ Ph	Ms	H
45	Йe	H	0Me	COOPh-4-CH3	Ms	H
	Иe	H	0Me	COOPh-4-CI	Ms	H
•	Me	H	0Me	COOPh-4-NO2	Ms	H
	Иe	H	OMe	COOCH ₂ SiMe ₃	ăs.	H

0 282 944

5	A	В	X	Y	Z	Q.
	Иe	H	0Me	C0078	Ms	TT .
	Иe	Ħ	0Me	COOCH ZY8	Ms	H
	Мe	H	0Me	C00Y9	ns Ms	H H H H H
	Мe	H .	0Me	C00Y10	Ms	п
10	Мe	Ħ	0Me	CONHSO ₂ CH ₃		H
	Me	H	OMe '	CONHSO ₂ CF ₃	Ms	Ħ
•	Et	Ĥ	Ме	C00Y4	Ms	H
	Et	H	Иe		Ms	H
	Et	n n		C00Y5	Ms	H
15	Et	H H H	Ме	C00Y6	Ms	H
	Et	Д. 17.	Ме	COOCH ₂ CH ₂ Cl	Ms	H
	Et	П П	Me	COOCH ₂ CF ₃	Ms	H
		H H H	Me	COOCH ₂ CCl=CH ₂	Ms	H H H
	Et	H	Me	COOCH ₂ CH ₂ OCH ₃	Ms	H
20	Et	Ħ	Мe	COOCH ₂ SCH ₃	Ms	H
	Et	H	Ме	COOCH ₂ CH ₂ OCH ₂ CH ₂ C1	Ms	Ħ
	Et	H	Ме	COOCH ₂ CH ₂ OM ₂	Ms	H
	Et	Ħ	Me	COOCH 2OCH 2CH 2OCH 3	Ms	
05	Et	H	Мe	COOCH z CH z Ms	Ms	Ħ
25	Et	H H H H H H H H H H H H H H	Me	COOCH ₂ CH ₂ CN	Ms.	n
	Et	H	Me	COOCH ₂ CH ₂ NHCH ₃	Ms	H
	Et	H -	Me	COOCH ₂ CH ₂ OH	en en	H
	Et	H	Me	COOCH _z CH ₂ CH ₂ NO ₂	Ms	H
30	Et	H	Me	C00Y7 -	. Ms	
-	Et	H ·	Me	COOCH ₂ COCH ₃	ns Ms	H
	Ēŧ	H	Ме	COOCH ₂ CO ₂ CH ₃	ns Ms	. Н
	Et	Ħ	Мe	COOCH (CH ₃) COOEt		H
	Et	Ħ	Ме	COOCH ₂ CH ₂ OPh	Ms V-	H
35	Et	Ä	Ме	COOCH ₂ CH ₂ OCH ₂ Ph	Ms.	H
		Ĥ	Ме		Ms	H
	Et Ét	Ħ	Me	COOPh-4-CH ₃	Ms	<u>H</u>
	Ēt	H		COOPh-4-C1	Ms	Ħ:
	Et	H	Ме	COOPh-4-\\0z	Ms .	H
ю	Et	H	Йe	COOCH ₂ SiMe ₃	Ms	H
	Et		Йe	COOY8	Ms	H
		H	Йe	COOCH ₂ Y8	Ms	H
	Et Et	H	Мe	COOYS	В	H.
		H	Ме	COOYIO	Ms	H. H
15	Et	<u>H</u> .	Мe	CONHSO _z CH ₃	Ms	H- H
	Et	H	Мe	CONHSO ₂ CF ₃	Ms	H
	Et	H	Cl	COOY4	Ms	H
	Et	H	Cl	C00Y5	Ms	H

-						
-	A	Б	Х	Y	· Z	Q
	Et	H	Cl	C00Y6	Ms	н
	Et	H	ČĪ.	COOCH ₂ CH ₂ C1	iis Ms	H H H H H H H H H H H H H H H H H H H
	Et	H	CI .	COOCH ₂ CF ₃		п п
	Et	11	CI		Ms	11
	Et	11 17		COOCH ₂ CC1=CH ₂	ns	<u>н</u>
		<u>n</u>	C1	COOCH ₂ CH ₂ OCH ₃	Ms	H
	Et	Ħ	CI	COOCH ₂ SCH ₃	Ms	H
	Et	ннннннннн	Cl	COOCH ₂ CH ₂ OCH ₂ CH ₂ Cl	zľi	H
	Et	H	CI	COOCH _z CH ₂ OMs	Ms	Ħ
	Εt	H	C1	COOCH 2OCH 2CH 2OCH 3	Ms	Ĥ
	Et	H	Cl	COOCH ₂ CH ₂ Ms	ris .	Ĥ
	Et	ਸ਼ੌ	Čĺ	COOCH ₂ CH ₂ CN	Ms	<u>"</u>
	Et	. g	CI			t t
	Et	<u>п</u>		COOCH CH ANHCH 3) is	<u>п</u>
		п	Cl	COOCH 2CH 2OH	lis	.H
	Εt	Π̈	CI	COOCH _z CH _z CH _z NO _z	Ms	H
	Et	H	C1	COOY7	2K	H
	Et	H	CI	COOCH _z COCH _z	Ms	H
	Et	H	Cl	COOCH ₂ CO ₂ CH ₂	Ms	H
	Et	H	CI	COOCH (CH3) COOEt	Ms.	Ĥ
	Et.	H	Cl	COOCH ₂ CH ₂ OPh	žis.	H. H
	Et	Ħ	ČÌ	COOCH ₂ CH ₂ OCH ₂ Ph	iis Xis	Ħ
	Et	H	CI	COOPh-4-CH ₃		H
	Et	H H	C1	COOLF 1 C1	ăs L	Ω
	E+	H		COOPH-4-C1	řis.	п
	Et	п	CI	COOPh-4-NOz	Ns.	H H H
	Et	H .	C1	COOCH _z SiMe ₃	Ms	H
	Et	H	C1	C00Y8	2K	H
	Et	H	CI	COOCH _z Y8	Ns.	H
	Et	H	Cl	C00Y9	Ms	H H H H
	Et	H	Ci	C00Y10	zK	Ħ
	Et Et	H	C1	CONHSO 2CH 3	Ms	Ħ
	Ēŧ	Ħ	ČÌ	CONHSO 2CF 3	Ms	Ħ
	Et	Ħ	0Me	C00Y4		H
	Et	H			Ms	Д 17
	C L		0Me	C00Ý5	lls	H
	Et	H	0Me	C00Y6	zK	. Н
	Et	H	0Me	COOCH _z CH _z C1	ak	H
	Εt	H	0Me	COOCH _z CF _z	2K	H
	Et Et	H	0Me	COOCH _z CCl=CH _z	zK	H
	Et	H	0Me	COOCH 2 CH 2 OCH 3	Ms	Ĥ
	Et	H	0Me	COOCH ZSCH 3	Ms	Ħ
	Ēŧ	Ħ	0Me	COOCH ₂ CH ₂ CH ₂ Cl	Ns ZK	Ħ
	Et	H	OMe	COOCH ₂ CH ₂ OMs		H
	E 6	11	one	CUUCA ZUA ZUAS	Ms	п

				•		
5	A	В	X	. Y	Z	Q
	Et	H	0Me	COOCH 2 HO2 HO00		·
	Et	H	0Me	COOCH CH2CH2MS	ăs	H
	Εt	H	OMe	COOCH CH CH	Ms	H
	Et	H	0Me	CH2CH2CH2CH2	Ms.	. Н
10	Et	H	0Me	COOCH 2 CH 2 OH	iis u	Ħ
	Et	H	0Me	COOCH ₂ CH ₂ CH ₂ NO ₂	ali Ma	<u>H</u>
	Et	H	0Me	COOY7	Ms	H
	Et	H	0Me	COOCH 2 COCH3	Ms	H
15	Et	H	0Me	COOCH 2CO 2CH 3	Ms H-	<u> </u>
	Et	H	0Me	COOCH (CH3) COOE t	Ms V-	H
	Et	H	0Me	COOCH ₂ CH ₂ OPh	Ms Ms	H
	Et	H	0Me	COOCH ₂ CH ₂ OCH ₂ Ph	Ms Ms	· H
	Et	H	0Me	COOPh-4-CH;	Ms Ms	11
20	Et	H	0Me	. COOPh-4-C1	ris Ms	Ħ
	Et	H	OMe	COOPh-4-NO2	ns Ms	H H
	Et	H	0Me	COOCH _z SiMe ₃	ns Ms	
	Et	H	0Me	COOY8	ms Ms	Д
25	Et	H H H	0Me	COOCH ZY8	Ms	· - H
20	£ŧ	H	0Me	COOYS	iis Ns	H
	Et	H	OMe	COOYIO	Ms	H
	Et	H	0Me	CONHSO 2CH3	Ms	H
	Et	H	0Me	CONHSO ₂ CF ₃	Ms	H H
30	i-Pr	H	Мe	C00Y4	Ms	H .
	i-Pr	H	. Me	C00Y5	Ms	H .
	i-Pr	H	Me	COOY6	Ms	H
	i-Pr	H	Мe	COOCH _z CH _z C1	Ms	H
	i-Pr	H	Me	COOCH ₂ CF ₃	žis Žis	·H
<i>3</i> 5	i-P r i-P r	H	Ме	COOCH ₂ CCI=CH ₂	Ms	H.
	i-Pr	H	Мe	COOCH ₂ CH ₂ OCH ₃	Ms	H H H H
	i-Pr	H	Me	COOCH ₂ SCH ₃	Ms	·Ħ
	i-Pr	H	Мe	COOCH ₂ CH ₂ OCH ₂ CH ₂ CI	Ms	H .
40	i-Pr	H	Me	COOCH ₂ CH ₂ OM ₅	its	Ħ
	i-Pr	H	Йe	COOCH zOCH zCH zOCH3	Ms	H
	i-Pr	H	Мe	COOCH ₂ CH ₂ M ₅	Ms	
	i-Pr	H H	Ме	COOCH 2CH2CN	Ms	H H H
	i-Fr		Me	COOCH 2CH 2NHCH3	Ms	Ħ.
45	i-Fr	H	Иe	COOCH ₂ CH ₂ OH	Ms	H
	i-Pr	H	Me	COOCH=CH=CH=NO=	Ms	Ħ
	i-Pr	H	Ме	COOYT	Ms	H
_	1-11	H	Me	COOCH ₂ COCH ₃	Ms	Ĥ

5 -	i-Pr i-Pr i-Pr	B H H	X He	Y	Z	Q.
10	i-P r i-Pr	H H	Жa			
10	i-Pr	Ħ		COOCH ₂ CO ₂ CH ₃	Ms	17
10	i-Pr		Иe	COOCH (CHa) COOEt	ns Ms	Ħ
10		Ħ	Ме	COOCH ₂ CH ₂ OPh		ннннннннн
10	i-Pr	H H	Me	COOCH CH ACH B	Ms	H
	i-Pr	11		COOCH = CH = OCH = Ph	Νs	H
	i-Pr	H H	Ме	COOPh-4-CH ₃	Ms	H
		п	ile -	COOPh-4-C1	. Ms	Ħ
	i-Pr	H H	Me	COOPh-4-NOz	Ms	Ħ
	i-Pr	H	Me	COOCH ₂ SiMe ₃	Ms	Ħ
15	i-Pr	H	Мe	C00Y8	Ms	ü
	i-P r	H	Ме	COOCH 2 Y8	Ms	17
	i-P r	H	Мe	C00Y9	Ms	11 11
	i-Pr	Ħ	Йe	C00Y10		П
	i-Pr	Ħ	Иe		Ms.	H
20	i-Pr	Ħ		CONHSO 2 CH 3	Ms	Н
	i-Pr	H	Иe	CONHSO 2CF 3	Ms	H
			CI	C00Y4	äls	Н
	i-Pr	H	CI	C00Y5	Ms	H
	i-Pr	H	CI	C00Y6	Ms	H
25	i-Pr	H	C1	COOCH _z CH _z C1	Жs	Ħ
	i-Pr	H	Cl	COOCH ₂ CF ₃	zK	H
	i-Pr	H	Cl	COOCH CCC1=CH2	Ms	Ħ
	i-Pr	H	CI	COOCH 2CH 2OCH 3	Ms	Ħ
	i-P r	H	ČĪ	COOCH ₂ SCH ₃	Ms	П.
30	i-Pr	Ħ	Ci	COOCH ₂ CH ₂ CH ₂ CI		H
30	i-Pr	Ē.	CI		Ms	H
	i-Pr	Ħ	C1	COOCH 2CH 20Ms	Ms	H
	i-Pr	H		COOCH 2OCH 2OCH 3	Ms	H
	i-Pr		CI	COOCH 2CH 2Hs	Ms	• Н
35		H	CI	COOCH = CH = CN	Ms	H
33	i-Pr	H	CI	COOCH 2CH 2NHCH3	Ms	H.
	i-Pr	H	CI	COOCH ₂ CH ₂ OH	Ms	H
	i=Pr	H	C1	COOCH _z CH _z CH _z NO _z	Мs	H
	i-Pr	H	C1	C00Y7	Ms	H
40	i-Pr	H	C1	COOCH2COCH3	Ms	H.
40	i-Pr	H	ČĪ	COOCH 2CO 2CH3	Ms	H
	i-Pr	Ĥ	ČÌ	COOCH (CH ₃) COOEt		H
	i-P r	H	CI	CUUCA CA UBF	Ms u_	
	i-P r	Ħ	CI	COOCH CH OCH PL	Ms	H
	ī-P -	H		COOCH 2 CH 2 OCH 2 Ph	Ms	H
	i-Pr	n H	CI	COOPh-4-CH ₃	Мs	H H
			CI	COOPh-4-Cl	Ms	H
	i-Pr	H	C1	COOPh-4-NO2	Ms	H
	i-Pr	H	Cl	COOCH _z SiMe ₃	Ms	H

0 282 944

5	. <u>A</u>	В	Х	Y	Z	
	i-Pr i-Pr i-Pr i-Pr	H H H H	C1 C1 C1 C1	COOAIO COOA6 COOC45A8 COOA8	Ms Ms Ms	H
10	i-Pr i-Pr i-Pr i-Pr	Н Н Н	CI CI OMe OMe	CONHSO ₂ CH ₂ CONHSO ₂ CF ₂ COOY4 COOY5	Ms Ms Ms Ms	H H H H
15	i-Pr i-Pr i-Pr i-Pr	H H H H	OMe OMe OMe	COOY6 COOCH ₂ CH ₂ C1 COOCH ₂ CF ₃ COOCH ₂ CC1=CH ₂	Ms Ms Ms Ms	Н Н Н Н Н
20	i-Pr i-Pr i-Pr i-Pr	H H H	OMe OMe OMe OMe OMe	COOCH ₂ CH ₂ OCH ₃ COOCH ₂ SCH ₃ COOCH ₂ CH ₂ CH ₂ C1 COOCH ₂ CH ₂ OMs COOCH ₂ CH ₂ OCH ₃	Ms Ms Ms Ms	H H H
25	i-Pr i-Pr i-Pr i-Pr i-Pr	H H H	OMe OMe OMe OMe	COOCH ₂ CH ₂ H ₂ COOCH ₂ CH ₂ CH COOCH ₂ CH ₂ NHCH ₃ COOCH ₂ CH ₂ OH	Ms Ms Ms Ms	Н Н Н Н
30	i-Pr i-Pr i-Pr i-Pr	H H H H	OMe OMe - OMe OMe OMe	COOCH ₂ CH ₂ CH ₂ NO ₂ COOY7 COOCH ₂ COCH ₃ COOCH ₂ CO ₂ CH ₃	Ms Ms Ms Ms	H H H
35	i-P r i-Pr i-Pr i-Pr	H H H H	OMe OMe OMe OMe	COOCH (CH ₂) COOE t COOCH ₂ CH ₂ OPh COOCH ₂ CH ₂ OCH ₂ Ph COOPh-4-CH ₃ COOPh-4-CI	Ms Ms Ms Ms	H H H H
40	i-P r i-Pr i-Pr i-Pr	H H H H	OMe OMe OMe OMe OMe	COOCH-4-NO2 COOCH-281Me3 COOCH-281Me3 COOCH-4-NO2	Ms Ms Ms Ms Ms	H H H H
45 —	i-Pr i-Pr i-Pr	H H H	OMe OMe OMe	COOYIO CONHSO2CH2 CONHSO2CF2	ns Ms - Ms Ms	H H H

;	A	В	X	Y	Z	Q.
1	Me	Н	Йe	CON(CH ₃)OCH ₃	Ms	
	Me	H	Иe	CONHPh	iis Iis	Ħ
	Мe	H	Мe	COOCH ₂ COC (CH ₃) ₃	Ms	H H H H H H H
	Иe	H	. Me	COOCH 2 COPh		П
	Иe	Ĥ	Ме	C00Si (CH ₃) 3	Ms	Ц
	Me	· Ħ	Me		Мs	H
	Мe	Ĥ	Ме	COON=C(CH ₃) ₂	Ms	H
	Me	Ħ	Me	C00Y11	Ms	H
	Me	Ħ	Ме	C00Y12	Ms	H
	Ме	H		cocchiococ (CHa) a	Ms	H
	Me	H ·	Me M-	COOCH 2OCOCH 3	Ms	H.
	Me		Ме	COOCH 2CH 2OCH 2CH=CH2	Ms	H H H
	Me	H	Иe	$COOCH_zCH_zOCH_zC = CH$	Ms	H
		H	0Me	CON (CH ₃) OCH ₃	2K	H
	ile V-	H	0Me	CONHPH	Ms	H
	Me	H	0Me	COOCH ₂ COC (CH ₃) ₂	Ms	H
	Me	H	0Me	COOCH _z COPh	Ms	Ĥ·
	Иe	H	0Me	COOSi (CH ₃) 3	Ms	Ĥ
	Мe	H	0Me	COON=C (CH ₃) ₂	Ms	Ĥ
	Ие	H H H	0Me	COOY11	Ms	H
	Me	H	0Me	C00Y12	Ms	H
	Мe	H	0Me	COOCH = OCOC (CH =) =	Ms	H
	Мe	H	0Me	COOCH 20COCH 3	Ms	n u
	Иe	. Н	0Me	COOCH ₂ CH ₂ OCH ₂ CH=CH ₂	ns Ns	H
	Мe	H	0Me	COOCH ₂ CH ₂ OCH ₂ C=CH		H
	ite	Ħ	CI	CON (CH ₃) OCH ₃	Ms v-	H
	Мe	Ħ	. CI	CONHPH	Ms	H
	Me	$\widetilde{\mathtt{H}}$	CÎ	COOCH ₂ COC (CH ₃) ₃	Ms	H
	Me	Ĥ	CI	COCCUSCOC (CU3) 3	Ms	H
	Me	Ħ	CI •	COOCH_COPh	Ms	<u>H</u> -
	Me ~	Ħ	CI	COO3 i (CH ₃) 3	Ms	H
	Жe	Ħ		COON=C (CH ₂) ₂	Ms	H
	Me	п 17	Cl	C00Y11	Ms	H
	Me	H	CI	COOY12	Ms	H H H H
	ne Me	n H	CI	COOCH=OCOC(CH=)=	Мs	
	ne Me		C1	COOCH 2OCOCH 3	Ms	H
		H	CI	COOCH 2CH 2OCH 2CH=CH2	Ms .	H
	Me E:	H	CI	$COOCH_2CH_2OCH_2C = CH$	Ms	H
	Et	H	Ме	CON (CH ₃) OCH ₃	Ms	H
	Et	H	Me	CONHPh	Ms	Η̈́
	Et	H	Me	COOCH ₂ COC (CH ₃) ₃	Ms	H H H H
	Et	H	Ме	COOCH 2 COPh	Ms	Ħ

0 282 944

## A B X Y Z Q Et					•		
Et H Me COOSI (CH ₃) 2 Ms H Et H Me COON=C (CH ₃) 2 Ms H Et H Me COOY11 Ms H Et H Me COOY12 Ms H Et H Me COOY12 Ms H Et H Me COOY12 Ms H Et H Me COOX1400000000000000000000000000000000000	•	A	В	X	Y	Z	Q.
Et H Me COON_C(CH_a) 2 Ms H Et H Me COOY_11 Ms H Et H Me COOY_12 Ms H Et H Me COOCH_2CCCC(CH_a) 2 Ms H Et H Me COOCH_2CCCC(CH_a) 2 Ms H Et H Me COOCH_2CCCC(CH_a) 2 Ms H Et H Me COOCH_2CCCC(CH_a) 2 Ms H Et H Me COOCH_2CCCC(CH_a) 3 Ms H Et H OMe COOCH_2CGCC(CH_a) 3 Ms H Et H OMe COOCH_2CGC(CG_a) 2 Ms H Et H OMe COOCH_2CGC(CG_a) 2 Ms H Et H OME COOCH_2CGC(CG_a) 2 Ms H Et H OME COOCH_2CGC(CG_a) 2 Ms H Et H OME COOCH_2CGC(CG_a) 2 Ms H Et H OME COOCH_2CGC(CG_a) 2 Ms H Et H OME COOCH_2CGC(CG_a) 2 Ms H Et H OME COOCH_2CGC(CG_a) 2 Ms H Et H OME COOCH_2CGC(CG_a) 3 Ms H Et H OME COOCH_2CGC(CG_a) 3 Ms H Et H OME COOCH_2CGC(CG_a) 3 Ms H Et H OME COOCH_2CGC(CG_a) 3 Ms H Et H OME COOCH_2CGC(CG_a) 3 Ms H Et H OME COOCH_2CGC(CG_a) 3 Ms H Et H OME COOCH_2CGC(CG_a) 3 Ms H Et H OME COOCH_2CGC(CG_a) 3 Ms H Et H OME COOCH_2CGC(CG_a) 3 Ms H Et H OME COOCH_2CGC(CG_a) 3 Ms H Et H OME COOCH_2CGC(CG_a) 3 Ms H Et H C1 COOCH_2CGCC(CG_a) 3 Ms H ET H C1 COOCH_2CGCCC	5	Et	H	Me	C00Si (CH _a) -	Же	
Et H Me COOCH2CCCCH2 MS H Et H Me COOCH2CH2CCCCCH2 MS H Et H Me COOCH2CH2CCCCCCH2 MS H Et H Me COOCH2CH2CCCCCCH MS H Et H OME CONCH2CH2CCCCCCH MS H Et H OME CONCH2CH2CCCCCCH3 MS H Et H OME COOCH2CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC			Ħ		CDUN=C (CH=) =		n u
Et H Me COOCH2CCCCH2 MS H Et H Me COOCH2CH2CCCCCH2 MS H Et H Me COOCH2CH2CCCCCCH2 MS H Et H Me COOCH2CH2CCCCCCH MS H Et H OME CONCH2CH2CCCCCCH MS H Et H OME CONCH2CH2CCCCCCH3 MS H Et H OME COOCH2CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	-		H		COULT		П U
Et H Me COOCH2CCCCH2 MS H Et H Me COOCH2CH2CCCCCH2 MS H Et H Me COOCH2CH2CCCCCCH2 MS H Et H Me COOCH2CH2CCCCCCH MS H Et H OME CONCH2CH2CCCCCCH MS H Et H OME CONCH2CH2CCCCCCH3 MS H Et H OME COOCH2CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		Et	H				II U
Et H Me COOCH2CCCCH2 MS H Et H Me COOCH2CH2CCCCCH2 MS H Et H Me COOCH2CH2CCCCCCH2 MS H Et H Me COOCH2CH2CCCCCCH MS H Et H OME CONCH2CH2CCCCCCH MS H Et H OME CONCH2CH2CCCCCCH3 MS H Et H OME COOCH2CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	10		H		COOCH-0COC(CH-) -		n u
20			H		COOCH-COCCH-		17
20			H		COOCH - CH - OCH - CH = CH -		H II
20			H		COOCH ₂ CH ₂ OCH ₂ C≡CH		ä.
20			H		CON (CH ₂) OCH ₂		H H
20	15		H		CONHPh		H
20			H	0Me	COOCH 2 COC (CH 2) -		H · ·
20			H	0Me	COOCH 2 COPh		Ħ.
20			H	0Me	COOSI (CHa) a		Ħ
Et H OMe COOY12 Ms H Et H OMe COOCH2COC (CH2) 1 Ms H Et H OMe COOCH2COC (CH2) 1 Ms H Et H OME COOCH2COC (CH2) 1 Ms H Et H OME COOCH2COCH3 MS H Et H OME COOCH2CH2CH2CH2CH2CH2 MS H Et H OME COOCH2CH2CH2CH2CH MS H Et H C1 CON (CH2) OCH2 MS H Et H C1 COOCH2COC (CH3) 1 MS H Et H C1 COOCH2COC (CH3) 2 MS H Et H C1 COOCH2COC (CH3) 3 MS H Et H C1 COOCH2COC (CH3) 3 MS H Et H C1 COOCH2COC (CH3) 3 MS H Et H C1 COOCH2COC (CH3) 3 MS H Et H C1 COOCH2COC (CH3) 3 MS H Et H C1 COOCH2COC (CH3) 3 MS H Et H C1 COOCH2COCC (CH3) 3 MS H Et H C1 COOCH2COCC (CH3) 3 MS H Et H C1 COOCH2COCC (CH3) 3 MS H Et H C1 COOCH2COCC (CH3) 3 MS H Et H C1 COOCH2COCC (CH3) 3 MS H Et H C1 COOCH2COCC (CH3) 3 MS H Et H C1 COOCH2COCCH2 MS H Et H C1 COOCH2COCCH2CH=CH2 MS H Et H C1 COOCH2COCCH2CH=CH2 MS H Et H C1 COOCH2CCH2CCH=CH2 MS H Et H C1 COOCH2CCCC (CH3) 3 MS H Et H C1 COOCH2CCC (CH3) 3 MS H Et H C1 COOCH2COCC (CH3) 3 MS H ET H C1 COOCH3COCC (CH3) 3 MS H ET H C1 COOCH3COCC (CH3) 3 MS H ET H C	20		H	0Me	COON=C (CH ₃) ₂		Ħ
Et H OMe COOCH_2OCOC (CH_3) 1 Ms H Et H OMe COOCH_2OCOC (CH_3) 1 Ms H Et H OMe COOCH_2OCOCH_3 Ms H Et H OMe COOCH_2OCH_2CH=CH_2 Ms H Et H OMe COOCH_2CH_2CH=CH_2 Ms H Et H CI CON(CH_3) OCH_3 Ms H Et H CI CON(CH_3) OCH_3 Ms H Et H CI COOCH_2COC (CH_3) 2 Ms H Et H CI COOCH_2COC (CH_3) 3 Ms H Et H CI COOCH_2COCH Ms H			H	0Me			;;
Et H OMe COOCH₂OCOC (CH₃) 1 Ms H Et H OMe COOCH₂COCOCH3 Ms H Et H OMe COOCH₂COCOCH3 Ms H Et H OMe COOCH₂COCH2CH=CH2 Ms H Et H OMe COOCH₂CH2CH=CH2 Ms H Et H CI CON(CH₃) OCH₃ Ms H Et H CI COOCH₂COC (CH₃) 1 Ms H Et H CI COOCH₂COC (CH₃) 2 Ms H Et H CI COOCH₂COCH Ms H			H	0Me			Ħ
St			H				·
St			H		COOCH = OCOCH =		Ħ.
Et H C1 COOCH₂COC (CH₂) 2 Ms H Et H C1 CON(CH₂) OCH₂ Ms H Et H C1 COOCH₂COC (CH₃) 2 Ms H Et H C1 COOCH₂COC (CH₃) 3 Ms H Et H C1 COOCH₂COC (CH₃) 3 Ms H Et H C1 COOCH₂COC (CH₃) 3 Ms H Et H C1 COON=C (CH₃) 2 Ms H Et H C1 COOY11 Ms H Et H C1 COOCH₂COC (CH₃) 3 Ms H Et H C1 COOCH₂COC (CH₃) 3 Ms H Et H C1 COOCH₂COC (CH₃) 3 Ms H Et H C1 COOCH₂COC (CH₃) 3 Ms H Et H C1 COOCH₂COC (CH₃) 3 Ms H Et H C1 COOCH₂COCOC (CH₃) 3 Ms H Et H C1 COOCH₂COCOC (CH₃) 3 Ms H Et H C1 COOCH₂COCOCH₃ Ms H Et H C1 COOCH₂CH₂OCH₂C∃CH Ms H Et H C1 COOCH₂CH₂OCH₂C∃CH Ms H Et H C1 COOCH₂CH₂OCH₂C∃CH Ms H Et H C1 COOCH₂CH₂OCH₂C∃CH Ms H Et H C1 COOCH₂CH₂OCH₂C∃CH Ms H Et H C1 COOCH₂CH₂OCH₂C∃CH Ms H Et H C1 COOCH₂CH₂OCH₂C∃CH Ms H Et H C1 COOCH₂COC (CH₃) 3 Ms H Et H C1 COOCH₂COC (CH₃) 3 Ms H ##################################	25		H		COOCH2CH2OCH2CH=CH2		Ĥ
Et H C1 CON(CH ₃) OCH ₃ Ms H Et H C1 CONHPh Ms H Et H C1 COOCH ₂ COC(CH ₃) ₃ Ms H Et H C1 COOCH ₂ COPh Ms H Et H C1 COOSi(CH ₃) ₃ Ms H Et H C1 COON=C(CH ₃) ₃ Ms H Et H C1 COON=C(CH ₃) ₂ Ms H Et H C1 COOY11 Ms H Et H C1 COOY12 Ms H Et H C1 COOCH ₂ OCOC(CH ₃) ₃ Ms H Et H C1 COOCH ₂ OCOC(CH ₃) ₃ Ms H Et H C1 COOCH ₂ OCOC(CH ₃) ₃ Ms H Et H C1 COOCH ₂ COCOCH ₃ Ms H Et H C1 COOCH ₂ COCOCH ₃ Ms H Et H C1 COOCH ₂ COCOCH ₃ Ms H Et H C1 COOCH ₂ COCOCH ₃ Ms H Et H C1 COOCH ₂ COCOCH ₃ Ms H Et H C1 COOCH ₂ COCOCH ₃ Ms H Et H C1 COOCH ₂ COCOCH ₃ Ms H Et H C1 COOCH ₂ COCOCH ₃ Ms H Et H C1 COOCH ₃ COCH ₃ COCH ₃ Ms H Et H C1 COOCH ₃ COCH ₃ COCH ₃ Ms H Et H C1 COOCH ₃ COCH ₃ COCH ₃ Ms H Et H C1 COOCH ₃ COCH ₃ COCH ₃ Ms H Et H C1 COOCH ₃ COCC(CH ₃) Ms H Et H C1 COOCH ₃ COCC(CH ₃) Ms H Et H C1 COOCH ₃ COCC(CH ₃) Ms H Et H C1 COOCH ₃ COCC(CH ₃) Ms H Et H C1 COOCH ₃ COCC(CH ₃) Ms H Et H C1 COOCH ₃ COCC(CH ₃) Ms H Et H C1 COOCH ₃ COCC(CH ₃) Ms H Et H C1 COOCH ₃ COCC(CH ₃) Ms H			H		COOCH ₂ CH ₂ OCH ₂ C=CH		Ĥ
Et H C1 CONHPh Ms H Et H C1 COOCH₂COC (CH₃) ₂ Ms H Et H C1 COOCH₂COPh Ms H Et H C1 COOSi (CH₃) ₃ Ms H Et H C1 COON=C (CH₃) ₂ Ms H Et H C1 COOY12 Ms H Et H C1 COOY12 Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H C1 COOCH₂COC (CH₃) ₃ Ms H Et H Me COOCH₂COC (CH₃) ₃ Ms H			H		CON (CH ₃) OCH ₃		Ħ
Et H C1 C00N=C(CH ₃) ₂ Ms H Et H C1 C00Y11 Ms H Et H C1 C00Y12 Ms H Et H C1 C00CH ₂ OCOC(CH ₃) ₃ Ms H Et H C1 C00CH ₂ OCOC(CH ₃) ₃ Ms H Et H C1 C00CH ₂ OCOCH ₃ Ms H Et H C1 C00CH ₂ COCOCH ₃ Ms H Et H C1 C00CH ₂ COCOCH ₃ Ms H Et H C1 C00CH ₂ CH ₂ OCH ₂ C=CH Ms H Et H C1 C00CH ₂ CH ₂ OCH ₃ C=CH Ms H Et H C1 C00CH ₃ OCH ₃ Ms H Et H Me C0N(CH ₃)OCH ₃ Ms H i-Pr H Me C0OCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me C0OCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me C0OCH ₂ COC(CH ₃) ₃ Ms H			H		CONHPh	Ms	Ħ
Et H C1 C00N=C(CH ₃) ₂ Ms H Et H C1 C00Y11 Ms H Et H C1 C00Y12 Ms H Et H C1 C00CH ₂ OCOC(CH ₃) ₃ Ms H Et H C1 C00CH ₂ OCOC(CH ₃) ₃ Ms H Et H C1 C00CH ₂ OCOCH ₃ Ms H Et H C1 C00CH ₂ COCOCH ₃ Ms H Et H C1 C00CH ₂ COCOCH ₃ Ms H Et H C1 C00CH ₂ CH ₂ OCH ₂ C=CH Ms H Et H C1 C00CH ₂ CH ₂ OCH ₃ C=CH Ms H Et H C1 C00CH ₃ OCH ₃ Ms H Et H Me C0N(CH ₃)OCH ₃ Ms H i-Pr H Me C0OCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me C0OCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me C0OCH ₂ COC(CH ₃) ₃ Ms H	30	FE	<u>H</u>			Иs	Ħ
Et H C1 C00N=C(CH ₃) ₂ Ms H Et H C1 C00Y11 Ms H Et H C1 C00Y12 Ms H Et H C1 C00CH ₂ OCOC(CH ₃) ₃ Ms H Et H C1 C00CH ₂ OCOC(CH ₃) ₃ Ms H Et H C1 C00CH ₂ OCOCH ₃ Ms H Et H C1 C00CH ₂ COCOCH ₃ Ms H Et H C1 C00CH ₂ COCOCH ₃ Ms H Et H C1 C00CH ₂ CH ₂ OCH ₂ C=CH Ms H Et H C1 C00CH ₂ CH ₂ OCH ₃ C=CH Ms H Et H C1 C00CH ₃ OCH ₃ Ms H Et H Me C0N(CH ₃)OCH ₃ Ms H i-Pr H Me C0OCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me C0OCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me C0OCH ₂ COC(CH ₃) ₃ Ms H	30		H		COOCH z COPh	Ms	H
Et H C1 C00N=C(CH ₃) ₂ Ms H Et H C1 C00Y11 Ms H Et H C1 C00Y12 Ms H Et H C1 C00CH ₂ OCOC(CH ₃) ₃ Ms H Et H C1 C00CH ₂ OCOC(CH ₃) ₃ Ms H Et H C1 C00CH ₂ OCOCH ₃ Ms H Et H C1 C00CH ₂ COCOCH ₃ Ms H Et H C1 C00CH ₂ COCOCH ₃ Ms H Et H C1 C00CH ₂ CH ₂ OCH ₂ C=CH Ms H Et H C1 C00CH ₂ CH ₂ OCH ₃ C=CH Ms H Et H C1 C00CH ₃ OCH ₃ Ms H Et H Me C0N(CH ₃)OCH ₃ Ms H i-Pr H Me C0OCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me C0OCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me C0OCH ₂ COC(CH ₃) ₃ Ms H			<u>H</u>		COOSi (CH ₃) ₃	Ms	H
i-Pr H Me CONHPh Ms H i-Pr H Me COOCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me COOCH ₂ COPh Ms H			H		$COON=C(CH_3)_2$	Ms	H
i-Pr H Me CONHPh Ms H i-Pr H Me COOCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me COOCH ₂ COPh Ms H		£5.	H				H -
i-Pr H Me CONHPh Ms H i-Pr H Me COOCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me COOCH ₂ COPh Ms H	35	E	H				H
i-Pr H Me CONHPh Ms H i-Pr H Me COOCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me COOCH ₂ COPh Ms H		E C	H		COOCH 20COC (CH3) 3		H
i-Pr H Me CONHPh Ms H i-Pr H Me COOCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me COOCH ₂ COPh Ms H		C.E	n n		COOCH ₂ OCOCH ₃		H
i-Pr H Me CONHPh Ms H i-Pr H Me COOCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me COOCH ₂ COPh Ms H					COOCH & CH 2 OCH & CH = CH &		H
i-Pr H Me CONHPh Ms H i-Pr H Me COOCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me COOCH ₂ COPh Ms H	40	: n_					H
i-Pr H Me COOCH ₂ COC(CH ₃) ₃ Ms H i-Pr H Me COOCH ₂ COPh Ms H	40						H
i-Pr H Me COOCHaCOPh Ms H							
i-Pr H Me COOCH2COPh Ms H i-Pr H Me COOSi (CH3) 3 Ms H i-Pr H Me COON=C (CH3) 2 Ms H i-Pr H Me COOY11 Ms H i-Pr H Me COOY12 Ms H							<u>H</u> .
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$							H
i-Pr H Me $C00Y11$ Ms H $i-Pr$ H Me $C00Y12$ Ms H	45		n u				H
i-Pr H Me COOY12 Ms H			П U				H H
n ne COOY12 Ms H							H
		1-11	11	ue	C00Y12	ZM	н

<u>A</u>	В	X	Y	Z	Q
i-?=	H	Йe	COOCH=0COC(CH=)=	Ms	Н
i-Pr	H	Иe	COOCH 2OCOCH 3	Ms	
i-Pr	H	Мe	CH2=H3cH2CH2CH=CHz	Ms	Ħ
i-P-	H	Иe	COOCH2CH2OCH2C=CH	Иs	H
i-P r	H	0Me	CON (CH ₂) OCH ₂	Ms	Ħ
i-P r	H	0Me	CONHPh	กร	Ħ
i-P-	H	0Me	COOCH ₂ COC (CH ₂) ₂	2K	нннннн
i-Pr	Ħ	0Me	COOCHaCOPh	Ms	ਸ਼ੇ
i-Pr	H	OMe	COOSi (CH ₃) =	Ms.	Ħ
i-Pr	H	0Me	COON=C (CH ₃) _z	Ms	Ħ
i-Pr	H	0Me	C00Y11	Ms	Ĥ·
i-Pr	H	0Me	C00Y12	Ns.	H H H H H
i-P r	H	0Me	COOCH 2 OCOC (CH3) 3	Иs	ਸੌ
i-Pr	H	OMe	COOCH 20COCH 3	Ms	Ħ
i-Pr	H	0Me	COOCH a CH a OCH a CH = CH a	Ms	Ħ
i-P -	H	0Me	$COOCH_2CH_2OCH_2C = CH$	Ms.	ਜ ਜ
i-Pr	H	C1	CON (CH ₃) OCH ₃	ZK	H H
i-Pr	H	C1	CONHPh	Ms ·	Ē
· i-Pr	H	C1	COOCH ₂ COC (CH ₃) ₃	Ms	Ħ
i-Pr	H	CI	COOCH2COPh	ils	H H
i-Pr	H H H	CI	COOSi(CH ₃) ₃	Ms	Ħ
i-Pr	H	C1	COON=C (CH ₂) ₂	Ms	<u> </u>
i-Pr	H	CI	C00Y11	iis	H H
i-Pr	H	· CI	C00Y12	Ms	· <u>H</u> ·
i-Pr	H .	C1	COOCH 20COC (CH3) 3	Ms	H
i-Pr	H.	C1	C00CH 20C0CH 3	Ms	H
i-Pr	H	CI	COOCH2CH2OCH2CH=CH2	Ms	Ĥ
i-P r	. Н	CI	COOCH ₂ CH ₂ OCH ₂ C = CH	Ms	Ĥ

						•
5	<u>A</u>	В	X	Y	Z	Ç.
	Мe	H	Ме	HOzHO	Ms	17
	Me	H H H H H H H H	Me	CH ₂ OMe	ns Ms	H
	Иe	H	Мe	CH ₂ OMe	CI	п 17
10	Ме	H	Me	CH_zOMe	HeS	Н Н Н Н
10	Ме	H	Иe	CH ₂ OMe	MeSO	n T
•-	Иe	H	Me	CH _z OMe	Ms	<u>e</u> 1
	Me Ma	Н	Ме	CH _z OMe	MeS	QI
	Хe	H	Иe	CH ₂ OHe	MeS0	Q1
15	Ме Ме	H H	Мe	CH₂OMe	Ms	92
	ne Me	n	Ме	CH₂OMe	MeS	<u>92</u>
	Me	H H	Ме	CH₂OMe	MeS0	Q2
	Иe	H	Me	CH ₂ OMe	ž Š	Q3
20	Иe	H T	Me Me	CH ₂ OMe	MeS	Q3
	Мe	H H	Me	CH 20Me	MeS0	Q3
	Me	- <u>H</u>	Me	CH ₂ OMe	Ms	Q4
	Me	Ħ	ne Ne	CH _≈ OMe CH _≈ OMe	Ms	Q 5
	Мe	Ħ	Ме	CH ₂ OMe	Ms	66
25	Иe	H	Me	CH ₂ OMe	Ms M-	97
	Мe	H	Мe	CH ₂ OMe	Ms Ms	68
	Me	H	Йe	CH ₂ OEt	ns Ms	gg
	Йe	H	Me	CH ₂ OEt	CI	H H
30	Ме	H	Иe	CH ₂ OE t	MeS	H .
	Me Y-	H	Me	CH ₂ OEt	MeSO	H
	Ме	H	Мe	CH ₂ OE t	Ms	Q 1
	Me Me	H	Ме	CH ₂ OE t	MeS	Qi
.35	Ме	H	Йe	CH ₂ OE t	MeSO	Qī
. 33	Ие	H H	Ме	CH ₂ OEt	Ms	Q2
	lie	n H	Ме	CH _z OE t	MeS	9 2
	Me	H	йе Ме	CH _z OEt	MeS0	Q2 -
	Ме	Ħ	ne Me	CH ₂ OEt	Ms	93
40	Мe	Ä	Me	CH ₂ OEt	MeS	Q3
	Me	Ĥ	Ме	CH ₂ OEt CH ₂ OEt	MeS0	93
	Мe	Ĥ	Me	CH ₂ OE t	Иs	Q4 05
	Me	H	Ме	CH ₂ OE t	ව් <u>.</u>	Q5
45	Мe	H	Ме	CH ₂ OE t	ਲੋੜ ਅ-	Q6
. •	Me	H	Ме	CH ₂ OE t	Ms Ms	Q7
	Мe	H	Ме	CH ₂ OE t	ns Ns	6 8
	Me	H	Me	CH=OPr-i	ns Ms	# .
				· -	444	**

	A	В	X	Y	Z	Q
5	Иe	H	Йe	CHzOPr-i	CI	17
	Me	Ħ	Мe	CH ₂ OP _T -i	CI	H
	Иe	ਸੌ	Ме	CH ₂ OPr-i	MeS	H
	Me	H H	Ме	CH ₂ OPr-i	MeSO	H
10	Me	Ħ	Ме	CH ₂ OPr-i	Ms U	Q1
	Me	ä	Me	CH ₂ OPr-i	ZK Z	92
	Мe	H H	ne Me	CH ₂ OPr-n	Ms V-	9 3
	Me	H H H	Me		Ms C	H H H H H H
	Me	Ä,	Me	CH ₂ OPr-n	CI	<u>n</u>
15	Ме	H	ne Me	CH ₂ OPr-n	MeS	Ħ.
	Me	Ħ	ne Me	CH ₂ OPr-n	HeSO	H
	Me	11	ne Ne	$CH_2OCH = CH_2$ $CH_2OCH = CH_2$	Ms Ci	Ħ
	Me	T T	ne Me	$CH_2OCH = CH_2$	CI N-3	Ħ
20	Ме	77 11	ne Me	$CH_2OCH = CH_2$ $CH_2OCH = CH_2$	MeS	Ħ
20	Me	H H H	ne Me	$CH_2OCH = CH_2$ $CH_2OCH_1 = CH_2$	MeSO	H
	Me	H	ne Me	CH ₂ OCH ₂ CH=CH ₂	ak S	H H H
	he	H		CH ₂ OCH ₂ CH=CH ₂	CI	H
	ne Me	H	Me	CH ₂ OCH ₂ CH=CH ₂	MeS	H
25	Me	H	Ме	CH ₂ OCH ₂ CH=CH ₂	MeSO	H
	Me	H	Иe	CH ₂ OCH ₂ C ≡ CH	Ms	H
	Иe	H	Ме	CH 20CH 2C ≡ CH	C1	H
	Me	H	Йe	CH ₂ OCH ₂ C ≡ CH	MeS	H
	Иe	H	Иe	CH ₂ OCH ₂ C ≡ CH	MeSO	H
30	ne Me	H ·	Me	CH ₂ OCH ₂ CH ₂ CI	Ms	H
	Me	H	i ide	CH ₂ OCH ₂ CH ₂ C1	CI	Ħ
	Me	H	Мe	CH ₂ OCH ₂ CH ₂ C1	MeS	H
	ne Me		Me	CH ₂ OCH ₂ CH ₂ C1	MeSO	H
	Иe	H H	Ме	CH2OCH2CH2Br	Ms	H
35	Иe	n H	Me Ma	CH ₂ OCH ₂ CH ₂ CN	Ms	H
	ле Ле	H	Me Ma	CH ₂ OAm-n	Жs	H
	Иe	п Н	Me M-	CH ₂ 0-Y5	Ms	H
	Me	H	Ме	CHMeOH	Ms	H
40	ne Ме	n H	Me	CHMeOMe	Ms	H
	Me	n H	Йe	CHMeOMe	C1	H
	ne Me		Иe	CHMeOMe	MeS	H
	ne Me	H	Ме	CHMeOMe	MeS0	H
	ne Me	H	Me	СИМеОМе	. Ms	Q1
45	ne Me	H	Ме	CHMeOMe	Ms	92 93
	ne Me	H	Me	CHMeOMe	Ms	นั้ง
	ne Me	H H	Me	CHMeOEt	Ms	H
	116	п	Ме	CHMeOEt	CI	H

0 282 944

5	<u>A</u>	E	X	Y	Z	Q
	Ме	Н Н Н Н Н	Иe	CiMeOEt	MeS	H
	Йe	H	Мe	CHMeOE t	MeSO	H
	Мe	H	Иe	CHMeOEt	Ms	ü1
10	Me	H	Йe	CHMe0E t	Ms	. 02
	Мe	H	Мe	CHMeOE t	Ms	93
	Me	H	Me	CHMeOPr-i	Ms	n an
	Мe	H	Ме	CHMeOPr-i	CI	II. IT
	Мe	H	Мe	CHMeOPr-i	MeS	II.
15	Мe	H	Мe	CHMeOPr-i	MeSO	П U
	Мe	H	Мe	CHMeOPr-n	Ms	л u
	Мe	H	Me	CHMeOCH = CH ₂	ds ZK	Ω.
	Me	H	Мe	CHMeOCH = CHz	Ms	П U
	Иe	H	Me	CHMeOCH _z CH = CH _z	ns Ns	П
20	Иe	H	Мe	CHMeOCH ₂ C≡CH	Ms	11
	Мe	H	Ме	CHMeOCH2CH2C1	Ms .	Н Н Н Н Н Н Н Н Н Н Н Н Н Н Н Н Н Н Н
	Me	ннинининининниннин	Мe	CHMeO-Y5	Ms	H
	Мe	H	Иe	CMe _z OH	Ms	. ц
25	Ме	H	Ме	CMez0Me	Ms .	H H
	Мe	H	Иe	CMe = OMe	CI	n n
	Me	H	Ме	CMe z OMe	MeS	H
	Иe	H	Йe	CMe ₂ OMe	MeS0	Ħ
	Me	H	Ме	CMe _z 0Et	Ms	H
30	Мe	H	Иe	CMe _z OEt	C1	Ħ
	Ме	<u>H</u> -	Иe	CMe _z 0Et	MeS	Ħ
	. Me	H	Мe	CMe ₂ 0Et	MeS0	Ħ
	Ме	H	Иe	CMezOPr-i	Ms	нининин
35	Не	Ħ	Ме	CH ₂ CH ₂ OMe	Ms	Ĥ
33	Me	H	Иe	CH ₂ CH ₂ OMe	Cl	H
	Ме	H H H	Ме	CH ₂ CH ₂ OMe	MeS	Ĥ
	∄e	H	Ме	CH _z CH _z OMe	MeSO	Ħ
	Иe	H	Ме	CH ₂ CH ₂ OE t	Ms	H
40	Ие	H	Йe	CH ₂ CH ₂ OEt	CI	H
	Йe	H	Ме	CH ₂ CH ₂ OE t	MeS	H
	Иe	H	Ме	CH _z CH _z OE t	MeSO	H
	йе ×-	H H	Me	CHzCHzOPr-i	Ms	H
	Me	H	Ме	CH ₂ CH ₂ OP _T -i	Cl	H H H H
45	Me .	H H	Йe	CH ₂ CH ₂ OP ₇ -i	MeS	H
	Me Ma	H	Ме	CHzCHzOPr-i	MeSO	H
	Me	H	Ме	CHE tOH	Ms	H
	Me	H	Me	CHE tOMe	Ms	H

5	A	. В	Х	Y	Z	Q.
5	Йe	H	Ме	CHE tOMe	Cl	Н
	Me	Ħ	Ме	CHE tOMe	ЖеS	T.
	Me	Н Н Н Н	Ме	CHE:OMe	MeSO	ннннннннннн
	Иe	Ħ	Иe	CHE tOE t	ileso Ils	α.
10	Мe	ਸ਼ੇ	Ме	CHE tOPT - i	en en	<u>п</u>
	Иe	ਸ	Ме	CHzOCHzCHzOMe	ns Ns	n U
	Мe	H	Ме	CH ₂ OCH ₂ CH ₂ OMe	Cl	Д 17
	Иe	Ħ	Ме	CH ₂ OCH ₂ CH ₂ OMe		<u>п</u> 17
	Ме	Ħ	ne Me	CH ₂ OCH ₂ CH ₂ OMe	MeS Maso	<u> </u>
15	Me	n n	ne Me	CH ₂ OCH ₂ CH ₂ ONe CH ₂ OCH ₂ CH ₂ OE t	MeSO	п
	Me	H	Me		Ms u_	<u>п</u>
	Ме	H	ne Ne	CHMeOCH zCH zOMe	Ms u_	n
	Me	H		CH 20 - Y8	Ms V	n T
20	Me	H	Me Me	CH 20-Y9	ils V-	n
20	Me	H		CH ₂ 0-Y10	Ms M	п
	Me	H	Me	CHMe0-Y8	ils.	H
	ne Me	<u>п</u>	Иe	CHMeO-Y9	Ms	H
	ne Me	H	Йe	CHMeO-Y10	Ms	н
25		H H	Йe	CH ₂ 0-Y13	Ms	нннннннннн
	Ме	п п	Йe	CHMeO-Y13	Ms	H
	Ме	H	Же	CH ₂ NHMe	Ms	H
	Йe	H	Йe	CH ₂ NMe ₂	Ms	Ħ
	Me	H	Me	CH₂NE±Me	Ms	<u>H</u>
30	Me .	H H	Ме	CH _z NEt _z	Ms	H
	Me	H.	Me	CH ₂ -Y14	Ms	H
	Ме	H	Ме	CHMeNMe _z	Иs	H
	Me .	H	Ме	CH ₂ CH ₂ NMe ₂	Ms	H
Δ	Me	H	Ме	CHzOCHzPh	Ms	H
35	Йe	Ħ	Ме	CHMeOCH ₂ Ph	Ms	H
	Ме	H	Me	CH20CH2CO2He	Мs	H
	Мe	H	Иe	CH2OCH2CO2Et	Ms	H
	Иe	H	Иe	CH ₂ OCHMeCO ₂ Me	Ms	H H
40	Ме	H	Иe	CH ₂ CN	Ms	H
- •	Me	H	Иe	CHMeCN	Νs	H
	Ме	H	Me	CH ₂ SMe	Ms	H
	Ме	H	Йe	CH₂SMe	C1	H H
	Ме	H	Me	CH ₂ SMe	MeS	H
45	Me	H	Иe	CH ₂ SMe	MeS0	H
	Иe	H	Ме	CH ₂ SE t	zK	H
	Me	H	Иe	CH ₂ SEt	C1	Ħ ·
	Me	H	Иe	CH _z SE t	MeS	H

5	_A	В	X	Y	Z	Q
J	Ме	Ħ	Ме	CHaSEt	MeS0	H
	Me Me	H H	Ме	CH ₂ SOMe	Hs.	H
	Ме	H	йе Ме	CH ₂ SOEt	Ms	ннннннннннн
10	Мe	Ä	he He	CHzSOzMe CHzSOzMe	Ms	H
	Мe	H	Йe	CH ₂ SO ₂ Me	C1	H
	Ме	Ħ	Йe	CH _z SO _z He	MeS MeSO	且
	Me Me	H	lie	CH _z SO _z E t	Ms	H H
15	Me	п H	Йe	CH _z SO _z Et	CI	Ħ
	Мe	H H H H	Ие Ие	CH ₂ SO ₂ Et CH ₂ SO ₂ Et	MeS	H
	Me	H	Ме	CHMeSNe	MeSO	. H
	Me	Ħ	Йe	CHMeSEt	Ms Ms	H
20	Me Me	H	Me	CHMeS0 _z Me	Ms	H
	Me	<u>п</u>	. Me	CHMeSO _z Et	Ms	Ħ
	Йe	· #	lie lie	CHzSCHzCHzOMe CHzOCOMe	Ms	H
	Me	Ħ	Иe	CH ₂ OCOE ±	Ms Ms	H
25	Me	Ħ	Мe	CHMe0C0Me	ns Ms	n H
	Me Me	H	Ме	CH _z OSO _z Me	Ms	Ħ
	Me	п	Me Me	CH ₂ OSO ₂ Et	. As	Ħ
30	Et	нининининин	Me	CHMeOSOzMe CHzOH	Ms	нннннн
00	Et	H	Me	CH ₂ OMe	Ms Ms	H
	Et Et	H	Me	CH _z OMe	CI	II II
	Et	H H	Me	CH ₂ OMe	MeS	H
35	Et	H	йе Ме	CH ₂ OMe	MeSO	$\bar{\mathbf{H}}_{\perp}$
	Et	Ĥ	Не	CHzOMe CH2OMe	ils V-c	Q1
	Et	H	Мe	CH ₂ OMe	MeS MeSO	Q1 Q1
	Et Et	H H	Me	CH 20Me	Ms .	Q2
40	Et	n H	Me	CH ₂ OMe	MeS	Q2
	Et	H	Ме Ме	CH2OMe CH2OMe	MeSO	92
	E t E t	Ĥ	Иe	CH _z OMe	Ms	Q3
	Et	H	Иe	CH ₂ OMe	MeS MeSO	93 93 93
45 .	Et Et	H	Me	CH _z OMe	Ms	94 94
	Et	H H	Me	CH 20Me	Ms	94 95
	Et	a H	Me Me	CH 20Me CH 20Me	Ms Ms	96 97

	<u>A</u>	В	X	Y	z	Ç,
5	Et	H	Me	CH₂OMe	· Ms	nc
	Εt	H	Ме	CH₂OMe	Ns	68 89
	Εt	H .	Йe	CH ₂ OE t	Ms	n 42
	Εt	H	Me	- CH _z OE t	C1	H H H
10	Εt	H	Me	CH ₂ OE t	MeS	n
	Εt	H	Иe	CH 2OE t	MeSO	H H
	Εt	H	Me	CH ₂ OEt	Ms	<u>0</u> 1
	Et	H	Мe	CH ₂ OEt	ИеS	Q1
	Εt	H	Ме -	CH ₂ OE t	CSeK	QI
15	Et	H	Мe	CH ₂ OEt	Ms	02
	Εt	H	Мe	CH ₂ OEt	žieS	02
	Et	H	Me	CH ₂ OEt	NeSO	02
	Et	H	Me	CH ₂ OEt	Ns 2K	03
20	Et	H H	Мe	· CH ₂ OEt	MeS	92 92 92 93 93
	Et	H	Мe	CH ₂ OEt	MeS0	<u> </u>
	Et Et Et	H	Иe	CH ₂ OEt	Мs	Q4
	Et	H	Йe	CH = OE t	Ms	9 5
	Et	H H H H H H	Мe	CH _z OEt	Ms	9 6
25	Et	H	Мe	CH ₂ OEt	Ms	Q7
	Et	H	Me	CH _z OEt	Ms	<u>8</u> 9
	Et	H	Мe	CH ₂ OEt	Ms	80
	Et	H	Иe	CH=OPr-i	Ms	H
	Εż	H	Йe	CH ₂ OPr-i	CI	Ĥ
30	Et	Н -	Мe	CH ₂ OPr-i	MeS	H
		H H H H H	Йe	CH ₂ OPr-i	MeS0	Ĥ
	Et	H	Ме	CH _z OPr-i	Ms	QI
	Et	H	Ме	CH _z OPr-i	Ms	92
35	Et	H	Мe	CHzOPr-i	Ms	Q3
		H	Мe	CHzOPr-n	Ms	
	Et	H	Мe	CHzOPr-a	Cl	H H H H
	Et	<u>H</u>	Мe	CH₂OPr-n	MeS	H
	Et	H	Мe	CH ₂ OPr-n	MeSO	H
40	Et	H	Йe	$CH_2OCH = CH_2$	Ms	H
	Et	, <u>H</u>	Мe	$CH_2OCH = CH_2$	CI	H
	Et	H H	Ме	$CH_2OCH = CH_2$	ЖeS	H
	Et	H	Me	CH ₂ OCH = CH ₂	MeS0	H
45	Et	H H	Ме	$CH_2OCH_2CH = CH_2$	Ms	H
-	Et	H	Ие	$CH_zOCH_zCH = CH_z$	C1	H
	Et	H	Йe	CH ₂ OCH ₂ CH=CH ₂	MeS	H
_	Et	H	Me	$CH_zOCH_zCH = CH_z$	HeS0	H

_	<u> </u>	В	X	Y	·Z	Q
5	Et	Н	Йe	CH ₂ OCH ₂ C ≡CH	У.	
	Εt	H	Мe	$CH_2OCH_2C = CH$	Ms Cl	H
	Et	H	Йe	HD≡ OchochO	MeS	n
	Et Et	H	Me	CH ₂ OCH ₂ C ≡ CH	MeSO	n u
10	Et	H	Ме	CH ₂ OCH ₂ CH ₂ Cl	Ms	ii ii
	Et	H	Me	CHzOCHzCHzC1	CI	H H
	Et	H H H H H H H H H H	Ме	CH ₂ OCH ₂ CH ₂ CI	MeS	H
	Et	H	Ме	CH ₂ OCH ₂ CH ₂ CI	MeSO	Ħ
15	Et	H	Ме	CH2OCH2CH2Br	Ms	Ħ
	Et	н	Ме	CH ₂ OCH ₂ CH ₂ CN	Ms	Ħ
	Et	H	Ме	CH ₂ OAm-n	Ms	H
	Et Et	Ц .	Me	CH ₂ 0-Y5	Ms	H .
	Et	<u> </u>	Иe	CHMeOH	Ms ·	H
20	Et	Д 17	Иe	СНМеОМе	Ms	Н .
	Et	п u	lie	CHMeOMe	Cl	H
	Et		Иe	CHMeOMe	MeS	
	Et	п	Ме Ме	CHMeOMe	MeS0	- H ,
25	Εt	H	ne Ne	CHMeOMe	Ms	Q1
	Et Et	Ħ	ne Ne	CHMeOMe CHMeOMe	Ms	Q2
	Et	Ħ	Ие	CHMeOEt	Ms V	Q 3
	Et	H	Иe	CHMeOEt	Ms	H
	Ettt Ett Et E	H	Йe	CHMeOEt	C1 MeS	H
30	Εt	H	Me	CHMeOE t	nes MeSO	H H
	Et	H	Мe	CHMeOE:	Ms	g1
	Et	H	Иe	CHMeOEt	Ms	92
	Et	H	Ме	CHMeOEt	Ms	Q3 .
35	£t.	H	Йe	CHMeOPr-i	Ms.	
	Et Et	H	Me	CHMeOPr-i	CI	H
	E:	H	Иe	CHMeOPr-i	MeS	H H H H H
	Et	H	Ме	CHMeOPr-i	MeSO	H
40	Et	Ħ	Ме	CHMeOPr-n	Ms	Ħ
40	Εŧ	H	Ме	CHMeOCH = CH ₂	Ms	H
	Et E÷	H	Ме	$CHMeOCH = CH_{c}$	Ms	H
	Et Et	H	Де	CHMeOCHzCH = CHz	Ms	H
	Et	H H	Мe	CHMeOCH 2C = CH	Ms	H H H H
45	Et	n H	Me Ma	CHMeOCH ₂ CH ₂ C1	Ms	H .
•	Et	H	Ме	CHMe0-Y5	Ms	H
	Et	H	Ме Ме	CMezOH	ğs	H
		12	ne -	CMe _z 0Me	Ms	H

	-					
5	A	E	X	Y	Z	Q
Ū	Εt	H	Иe	CMe _z OMe	C1	TT .
	Et	нннннннннннн	Йe	CMe zOMe	MeS	Ħ
	Et	H	Иe	CMe z OMe	MeSO	11
	Et Et	H	Иe	CMezOEt	Ms	n n
10	E	H	Иe	CMe=OEt	Cl	ннининининин
	Et	H	Иe	CMezOEt	ЙeS	11. 27
	Et	H	Йe	CMez0Et	MeSO	II.
	Et	H	Иe	CMezOPr-i	· Ms	11
15	Et	H	Мe	CH ₂ CH ₂ OMe	ii. Z	H T
	Et	H	Иe	CH _z CH _z OMe	ČĪ	H H
	Et	H	Иe	CH ₂ CH ₂ OMe	MeS	H H
	Et	H	Me	CH _z CH _z OMe	MeSO	Ħ
	Et	H	Ме	CH2CH2OEt	Ms	H
20	Et	H	Иe	CH _z CH _z OE t	Cī	H
	Et	H	Мe	CH ₂ CH ₂ OEt	MeS	H.
	Et	H	Йe	CH ₂ CH ₂ OEt	MeSO	Ħ
	Et	H	Me	CH2CH2OPr-i	žis Žis	H
25	Et	<u>H</u> .	Йe	CH _z CH _z OPr-i	CI	H
25	Εż	H	Иe	CH ₂ CH ₂ OP _T -i	MeS	H
	Et	H	lie	CH ₂ CH ₂ OP _T -i	MeSO	Ħ
	Et	H	Иe	CHE tOH	Ms	H
	Εt	Ħ	Мe	CHE tOMe	Ms	Ħ
30	Et	Ħ	Ме	CHE tOMe	CI	Ĥ
	Et	Ħ	· Me	CHE tOMe	MeS	Ħ
	Et	Ħ	Me	CHE tOMe	MeSO	й
	Et	H	Мe	CHE ±0E ±	Ms	H
	Et	H	Me	CHE tOPr-i	ils.	Ĥ
35	Et	H	Мe	CH ₂ OCH ₂ CH ₂ OMe	ZM	Ħ
	Ęt Ēt	H	Мe	CH2OCH2CH2OMe	CI	Ĥ.
		H	Ие	CHzOCHzCHzOMe	MeS	H H H . H
	Et Et	H	Ме	CH2OCH2CH2OMe	MeSO	H
40		H .	Иe	CHzOCHzCHzOEt	Ms	H
	Et Et	H	Йe	CHMeOCH zCH zOMe	Ms	H
		H	Ме	CH=0-YB	Ms	Н
	Et Et	H	Ме	CH =0-Y9	Мs	H H H H H
	E+	H	Ме	CH=0-Y10 .	Ms	H
45	Et Et	H	Хe	CHMeO-Y8	Ms	H
	Et	H	Ме	CHMeO-Y9	Ms	H
	Et	H	Ме	CHMe0-Y10	Ms	H
	باند	H	Me	CH=O-YI3	Ms	H
		1				

5	A	В	X	Y	Z	Ę.
	Et Et	H H H H H H H H H H H H H H H H H H H	Йe	CHMeO-Y13	Иs	H
	Et	П 17	Иe	CH = NHMe	· Ms	H
	E+	<u>а</u> 17	Же	CH z WMe z	Ms	H
10	Et Et	Д	Иe	CH = NE the	Ms	Ħ
	Et	п	Ме	CH zNE tz	Ms	Ħ
	Et	П 17	Ме	CH ₂ -Yld	Ms	Ħ
	Et	<u>n</u>	Йe	CHMeNMe _z	Ms	Ħ
	Et	<u>n</u>	Иe	CH ₂ CH ₂ NMe ₂	Ms	й
15	E÷	П	Ме	CH 20CH 2Ph	Ms	Ħ
	Et Et	п	Иe	CHMeOCH₂Ph	Ms	Ħ
	Et.	п	Ме	CH ₂ OCH ₂ CO ₂ Me	Ms	Ħ.
	Et	П.	Ме	CH _z OCH _z CO _z Et	Ms	Ħ
20	Et	H H H	Ме	CH 20CHMeCO zMe	Ms	Ħ.
	Et	п	Ме	CH ≥ CN	Ms	н н н н н н н н н н н н н н н н н н н
	Et	H H	Ме	CHMeCN	Ms	Ħ
	Et	H	Ме	CH 2SMe	Ms	Ħ
	Et	п Н	Иe	CH _z SMe	CI -	H H
25	Et	H	Ме	CH _z SMe	MeS	H
	Et	H	Ме	CH₂SMe ·	MeSO	H
	Et	H	Ме	CH ₂ SEt	Ms	H
	Ēt	H	Мe	CH ₂ SE t	CI	H
30		H	Me	CH _z SE t	MeS	H
30	Ēŧ	Н -	Me Ma	CH ₂ SE t	MeSO	H
	ĒĖ	Ħ	Ме	CH ₂ SOMe	Ms	H
	EEEEEE	H	Ме Ме	CH ₂ SOE t	Ms	H H H H
	Ēŧ	H	ne Me	CH ₂ SO ₂ Me	Ms	H
35	Ēŧ	Ħ	ne Me	CH2SO2Me	CI	Н.
	Et	Ħ	ne Me	CH ₂ SO ₂ Me	MeS	H
	Ēt	Ħ	ne Me	CH ₂ SO ₂ Me	MeS0	Н.
	Et	Ħ	ne Me	CH _z SO _z Et	Ms	H
	Et	Ħ	ne Me	CH ₂ SO ₂ Et	CI	Ĥ ·
40	Et	Ĥ	Ме	CH ₂ SO ₂ Et	MeS	H H
	Et	H	Me	CH _z SO _z Et	MeS0	H
	Et	H	Me	CHMeSMe	Ms	H H
	Et	H	Me	CHMeSEt	Ms	H
45	Et	Ħ	ne Me	CHMeSOzMe	Ms	<u>H</u> .
	Et	H H	ne Me	CHMeSOzEt	Ms	H
	Et	H	ne Ne	CH 2SCH 2CH 20Me	Ms	H
	Et	Ħ	ne Me	CH OCOR:	Ms	H
			116	CH _z OCOE t	Ms	H

Et H Me CH-ONE MS H Et H Me CH-OSO-ME MS H Et H Me CH-OSO-ME MS H Et H Me CH-OSO-ME MS H Et H Me CH-OSO-ME MS H Et H Me CH-OSO-ME MS H Et H Me CH-OSO-ME MS H Et H Me CH-OME MS H Et H Me CH-OME MS H Pr-i H Me CH-OME MS H Pr-i H Me CH-OME MS H Pr-i H Me CH-OME MS GI Pr-i H Me CH-OME MS GI Pr-i H Me CH-OME MS GI Pr-i H Me CH-OME MS GI Pr-i H Me CH-OME MS GI Pr-i H Me CH-OME MS GI Pr-i H Me CH-OME MS GI Pr-i H Me CH-OME MS GI Pr-i H Me CH-OME MS GI Pr-i H Me CH-OME MS GI Pr-i H Me CH-OME MS GI Pr-i H Me CH-OME MS GI Pr-i H ME CH-OME MS GI	_	A	Е	Х	Y	Z	Q
Et H Me CH-OSO 2Me Ms H Et H Me CH-OSO 2Et Ms H Et H Me CH-OSO 2Et Ms H Et H Me CH-OSO 2Et Ms H Et H Me CH-OSO 2Et Ms H Pr-i H Me CH-OME Ms H Pr-i H Me CH-OME Ms H Pr-i H Me CH-OME Ms H Pr-i H Me CH-OME MeS H Pr-i H Me CH-OME MeS H Pr-i H Me CH-OME MeS H Pr-i H Me CH-OME MeS Q1 Pr-i H Me CH-OME MeS Q2 Pr-i H Me CH-OME MeS Q2 Pr-i H Me CH-OME MeS Q2 Pr-i H Me CH-OME MeS Q2 Pr-i H Me CH-OME MeS Q3 Pr-i H Me CH-OME MeS Q3 Pr-i H Me CH-OME MeS Q3 Pr-i H Me CH-OME MeS Q3 Pr-i H Me CH-OME MeS Q3 Pr-i H Me CH-OME MeS Q3 Pr-i H Me CH-OME MeS Q3 Pr-i H Me CH-OME MeS Q3 Pr-i H Me CH-OME MeS Q3 Pr-i H Me CH-OME MS Q4 Pr-i H Me CH-OME MS Q5 Pr-i H Me CH-OME MS Q6 Pr-i H MS Q6 Pr-i H MS Q6 Pr-i H MS Q6 Pr-i H MS Q6 Pr-i H MS Q6 Pr-i H MS Q6 Pr-i	5	E÷	Я	Иe	CHMEOCOME	Me	ਸ ਸ
Et H Me CH-OSO_Et Ms H Pr-1 H Me CH-OSO_TME Ms H Pr-1 H Me CH-OME MeS H Pr-1 H Me CH-OME MeS G1 Pr-1 H Me CH-OME MeS G1 Pr-1 H Me CH-OME MeS G1 Pr-1 H Me CH-OME MeS G1 Pr-1 H Me CH-OME MeS G2 Pr-1 H Me CH-OME MeS G2 Pr-1 H Me CH-OME MeS G2 Pr-1 H Me CH-OME MeS G2 Pr-1 H Me CH-OME MeS G3 Pr-1 H Me CH-OME MeS G3 Pr-1 H Me CH-OME MeS G3 Pr-1 H Me CH-OME MeS G3 Pr-1 H Me CH-OME MeS G3 Pr-1 H Me CH-OME MeS G3 Pr-1 H Me CH-OME MeS G3 Pr-1 H Me CH-OME MeS G3 Pr-1 H Me CH-OME MeS G3 Pr-1 H Me CH-OME MS G5 Pr-1 H Me CH-OME MS G5 Pr-1 H Me CH-OME MS G6 Pr-1 H Me CH-OME MS G6 Pr-1 H Me CH-OME MS G6 Pr-1 H Me CH-OME MS G6 Pr-1 H Me CH-OME MS G7 Pr-1 H Me CH-OME MS G6 Pr-1 H Me CH-OME MS G8 Pr-1 H Me CH-OME MS G9 Pr-1 H Me CH-OME MS G9 Pr-1 H Me CH-OME MS G9 Pr-1 H Me CH-OME MS G9 Pr-1 H Me CH-OME MS G9 Pr-1 H Me CH-OME MS G9 Pr-1 H Me CH-OME MS G9 Pr-1 H Me CH-OME MS G9 Pr-1 H Me CH-OME MS G9 Pr-1 H Me CH-OME MS G9 Pr-1 H Me CH-OME MS G9 Pr-1 H Me CH-OME MS G9 Pr-1 H Me CH-OME MS G1 Pr-1 H Me CH-OME MS G1 Pr-1 H Me CH-OME MS G1 Pr-1 H Me CH-OME MS G1 Pr-1 H Me CH-OME MS G1 Pr-1 H Me CH-OME MS G3 Pr-1 H ME CH-OME MS G3 Pr-1 H ME CH-OME MS G3 Pr-1 H ME CH-OME MS G3 Pr-1 H Me CH-OME MS G3 Pr-1 H Me CH-OME MS G3 PR-1 H MS G4 PR-1 H MS G4 PR-1 H MS G4 PR-1 H MS G4 PR-1 H MS G4 PR-1 H MS G4 PR		Εt	Ħ				Ħ
Pr-i		Et	Ħ				Ĥ
Pr-i		Et	H				Ħ
Pr-i	10	P . -i	H				H
Pr-i		Pr-i	H			Ms	H
Pr-i		"Pr-i	H	Йe	· CH ₂ OMe		H
Pr-i			H	Ме		MeS	H
Pr-i	15		H				H
Pr-i	. •		H				
Pr-i			H				
Pr-i			H				
Pr-i H Me CH20Me MeSO Q2 Pr-i H Me CH20Me Ms Q3 Pr-i H Me CH20Me MeSO Q3 25 Pr-i H Me CH20Me Ms Q4 Pr-i H Me CH20Me Ms Q5 Pr-i H Me CH20Me Ms Q6 Pr-i H Me CH20Me Ms Q7 90 Pr-i H Me CH20Me Ms Q8 Pr-i H Me CH20Et Ms Q9 Pr-i H Me CH20Et Ms Q1			H				92
Pr-i	20		H		Ch ₂ ONe		U 2
Pr-i			Н				U Z
Pr-i H Me CH20Me MeSO Q3 Pr-i H Me CH20Me Ms Q4 Pr-i H Me CH20Me Ms Q5 Pr-i H Me CH20Me Ms Q6 Pr-i H Me CH20Me Ms Q7 Pr-i H Me CH20Me Ms Q8 Pr-i H Me CH20Me Ms Q9 Pr-i H Me CH20Me Ms Q9 Pr-i H Me CH20Et Ms H Pr-i H Me CH20Et Ms H Pr-i H Me CH20Et MeS H Pr-i H Me CH20Et MeS Q1 Pr-i H Me CH20Et MeS Q2 Pr-i H Me CH20Et MeS Q3 Pr-i			п		CH ZUME		u ೧၁
25 Pr-i H Me CHzOMe Ms Q4 Pr-i H Me CHzOMe Ms Q5 Pr-i H Me CHzOMe Ms Q6 Pr-i H Me CHzOMe Ms Q7 Pr-i H Me CHzOMe Ms Q9 Pr-i H Me CHzOEt Ms H Pr-i H Me CHzOEt Ms H Pr-i H Me CHzOEt MeS Q1 Pr-i H Me CHzOEt MeS Q2 Pr-i H Me CHzOEt MeS Q2 Pr-i H Me CHzOEt MeS Q3 <t< th=""><th></th><th></th><th>п u</th><th></th><th>CT ON-</th><th></th><th>0.5</th></t<>			п u		CT ON-		0.5
Pr-i H Me CH ₂ OMe Ms Q5 Pr-i H Me CH ₂ OMe Ms Q6 Pr-i H Me CH ₂ OMe Ms Q7 Pr-i H Me CH ₂ OMe Ms Q9 Pr-i H Me CH ₂ OEt Ms H Pr-i H Me CH ₂ OEt Ms H Pr-i H Me CH ₂ OEt MeSO H Pr-i H Me CH ₂ OEt MeSO Q1 Pr-i H Me CH ₂ OEt MeSO Q1 Pr-i H Me CH ₂ OEt MeSO Q1 Pr-i H Me CH ₂ OEt MeSO Q2 Pr-i H Me CH ₂ OEt MeSO Q2 Pr-i H Me CH ₂ OEt MeSO Q3 Pr-i H Me CH ₂ OEt MeSO Q3 <th>25</th> <th></th> <th></th> <th></th> <th>CHIONE</th> <th></th> <th>04 42</th>	25				CHIONE		04 42
Pr-i H Me CH20Me Ms Q6 Pr-i H Me CH20Me Ms Q7 Pr-i H Me CH20Me Ms Q8 Pr-i H Me CH20Me Ms Q9 Pr-i H Me CH20Me Ms Q9 Pr-i H Me CH20Me Ms Q9 Pr-i H Me CH20Et Ms H Pr-i H Me CH20Et MeSO H Pr-i H Me CH20Et MeSO Q1 Pr-i H Me CH20Et MeSO Q2 Pr-i H Me CH20Et MeSO Q2 Pr-i H Me CH20Et MeSO Q3 Pr-i H Me CH20Et MeSO Q3 Pr-i H Me CH20Et MeSO Q3		P r -i	Ħ		CH = OMe		05
Pr-i		Pr-i	ਸ				96
Pr-i		Pr-i	Ħ				97
Pr-i H Me CHzOEt Ms H Pr-i H Me CHzOEt Ms H Pr-i H Me CHzOEt MeS H Pr-i H Me CHzOEt MeSO H Pr-i H Me CHzOEt MeSO QI Pr-i H Me CHzOEt MeSO QI Pr-i H Me CHzOEt MeSO QI Pr-i H Me CHzOEt MeSO Q2 Pr-i H Me CHzOEt MeSO Q2 Pr-i H Me CHzOEt MeSO Q3 Pr-i	20		Ħ		CH₂OMe		98
PT-i	30		H		CH ₂ OMe		99
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			H	Йe	CH ₂ OEt		H
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		_	H		CH _z OE t		H
Pr-i H Me CH₂OEt Ms Q1 Pr-i H Me CH₂OEt MeSO Q1 Pr-i H Me CH₂OEt Ms Q2 40 Pr-i H Me CH₂OEt MeSO Q2 Pr-i H Me CH₂OEt MeSO Q2 Pr-i H Me CH₂OEt MeSO Q3 Pr-i H Me CH₂OEt MeSO Q3 Pr-i H Me CH₂OEt Ms Q4 Pr-i H Me CH₂OEt Ms Q4 Pr-i H Me CH₂OEt Ms Q5			H		CH ₂ OE t		H
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	35 .		H		CH _z OE ±		H
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			H		CH ₂ OE t		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			H				
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$					CH OF:		0.5 #T
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	40				CATORF		02
$\begin{array}{cccccccccccccccccccccccccccccccccccc$							02
Pr-i H Me CH ₂ OEt MeSO Q3 Pr-i H Me CH ₂ OEt Ms Q4 Pr-i H Me CH ₂ OEt Ms Q5					CH_OF t		93
Pr-i H Me CH ₂ OEt MeSO Q3 Pr-i H Me CH ₂ OEt Ms Q4 Pr-i H Me CH ₂ OEt Ms Q5			H				aŝ
Pr-i H Me CH_2OEt Ms Q4 Pr-i H Me CH_2OEt Ms Q5	4-		H				9 3
Pr-i H Me CH ₂ 0Et Ms 95 Pr-i H Me CH ₋ 0E+ Ms 96	45		Ħ				Q 4
Pr-i H Ma CH-OR+ Ms 96			Ĥ				95
· · · · · · · · · · · · · · · · · · ·		Pr-i	H	lle	CH 20E t	Ms	96

						<u></u>
5	A	B	X	Y	<u>Z</u>	Q
	Pr-i	H	Ме	CH=OEt	Нs	97
	Pr-i	H	Йe	CH _z OEt	Ms	88
	Pr-i	H	Иe	CH _z OEt	Ms	
10	Pr-i	H	Мe	CH ₂ OPr-i	Ms	H
70	Pr-i	H	Мe	CHzOPr-i	CI	H
	Pr-i	H H H	Ме	CHzOPr-i	MeS	H
	Pr-i		Мe	CH₂OPr-i	MeSO	Н Н Н ОЭ
	Pr-i	Ħ	Me	CH₂OPr-i	Ms	Q1
15	-Pr-i	H	Йe	CH ₂ OPr-i	Ms	92
	Pr-i	H	Ме	CH ₂ OPr-i	Ms	Q S
	Pr-i	H	Йe	CH ₂ OPr-a	Мs	
	Pr-i	H	Me	CH ₂ OPr-n	· CI	H :
	Pr-i	H H	Ме	CH ₂ OPr-n	MeS	H
20	Pr-i Pr-i	H H H	Ме	CH ₂ OP _T -n	MeS0	H H H H
	Pr-i	u u	Йe	$CH_2OCH = CH_2$	Ms	. Н
	Pr-i	H H H H	Йe	CH _z OCH = CH _z	CI	H
	Pr-i	17	Me . Ne	CH ₂ OCH = CH ₂	MeS	. H
25	Pr-i	n u	ne Me	CH ₂ OCH = CH ₂ CH ₂ OCH ₂ CH = CH ₂	MeSO	H
	Pr-i	Ħ	ne Ne	CH ₂ OCH ₂ CH=CH ₂	Ms Cl	H
	Pr-i	Ħ	Ме	$CH_2OCH_2CH = CH_2$	MeS	П U
	Pr-i	H H H	Йe	$CH_zOCH_zCH = CH_z$	MeSO	п.
30	Pr-i	H	Me	$CH_2OCH_2C \equiv CH$	Hs.	H
••	Pr-i	H	Me	CH ₂ OCH ₂ C ≡CH	CI	H H H H H H
	Pr-i	H	Ие	CH _z OCH _z C ≡CH	MeS	Ħ
	Pr-i	H	Ме	CH _z OCH _z C ≡CH	MeS0	Ħ
	Pr-i	H	Яe	CH2OCH2CH2CI	Ms	H H
35	Pr-i	H	Иe	CH2OCH2CH2CI	Cl	H
	Pr-i	H	Ме	CH20CH2CH2C1	MeS	H
	Pr-i	H	Ме	CH2OCH2CH2C1	MeSO	H
	Pr-i	H	Ме -	CH2OCH2CH2Br	Ms	H
40	Pr-i	Н	Я́е	CH ₂ OCH ₂ CH ₂ CN	Ms	H
	Pr-i	H	Йe	CH ₂ OAm-n	Ms	H
	Pr-i	H	Me M-	CH ₂ 0-Y5	Ms	H
	Pr-i Pr-i	п .	Me ·	CHMeOH	Ms.	- H.
	Pr-i	н - н н	Не Мо	CHMeOMe	Ms	H . H . H
45	Pr-i	H	йе йе	CHMeOMe CHMeOMe	CI W-S	<u>n</u> .
	Pr-i	H	ne Me	Cameone Cameone	MeS MeSO	H H
	Pr-i	H	ne Ne	CHMeOMe	nesu Ms	n Q1
			110	OWIGO!!C	119	#T

•	A_	В	Х	Y	Z	Ç.
5	Pr-i	Н	Ме	СНИеОМе	Ms	92
	Pr-i	H	Йe	CHMeOMe	Ms	
	Pr-i	H	Иe	CHMeOEt	Ms	93 H H H
	Pr-i	H	Мe	CHMeOE t	Cl	H
10	Pr-i	Ħ	Йe	CHMeOE t	MeS	H
	Pr-i	Ĥ	Me	CHMeOEt	MeSO	H
	Pr-i	Ĥ	Мe	CHMeOE t	Ms	Q1
	Pr-i	Ħ	Иe	CHMeOEt	Ms	Q 2
15	Pi	Ħ	Me	CHMeOE t	Ms	Q3
15	P r -i	Ä	Йe	CHMeOPr-i	Ms	H
	Pr-i	Ĥ	Йe	CHMeOPr-i	Cl	H
	Pr-i	Ĥ	Мe	CHMeOPr-i	MeS	H -
	Pr-i	Ħ	Йe	CHMeOPr-i	MeSO	H
20	Pi	Ħ	Иe	CHMeOPr-n	Иs	H
	Pr-i	H	Мe	CHMeOCH = CH _z	Ms	H H H H
	Pr-i	Ħ	Йe	$CHMeOCH = CH_z$	Ms	H H
	Pr-i	H	Мe	CHMeOCH _z CH = CH _z	Ms	H
	Pr-i	H	Me	CHMeOCH ₂ C≡CH	Ms	H
25	Pr-i	H	Me	CHMeOCH zCH zCl	2K	• Н
	P=-i	H	Мe	CHMeO-Y5	Ms	H
	Pr-i	H	Йe	CMe _z OH	zří	ныннынныннын
	P i	H	Мe	CMe _z OMe	Ms	H
30	Pr-i	H	· Me	CMe=OMe	C1	H
-	Pr-i	H	Ме	CMe _z OMe	MeS	H
	Pr-i	H	Иe	CMe _z OMe	MeSO	H
	Pr-i	Н	Мe	CMez0Et	·Ms	H
	Pr-i	H	Мe	CMezOEt	C1	H
35	Pr-i	Н	Мe	CMezOEt	MeS	H
	Pr-i	H	Йe	CMez0Et	MeSO	H
	Pr-i	H	Мe	CMezOPr-i	Ms	H
	Pr-i	H	Иe	CH _z CH ₂ OMe	Ms	H
40	Pr-i	H	Йe	CH _z CH _z OMe	Cl	H
40	Pr-i	H	Йe	CH ₂ CH ₂ OMe	MeS	H
	Pr-i	H	Мe	CH ₂ CH ₂ OMe	MeSO	
	Pr-i	H	Me	CH ₂ CH ₂ OE t	ZК	H
	Pr-i	Ħ	Иe	CH ₂ CH ₂ OE t	C1	H
45	Pr-i	H	Мe	CH _z CH _z OE i	MeS	H H H
	Pr-i	H	Me	CH ₂ CH ₂ OEt	MeSO	H
	Pr-i	H	Иe	CH2CH2OPr-i	its	
	Pr-i	H	Мe	CHzCHzOPr-i	C1	H

5	A	В	Х	Y	Z	
10	Pr-i Pr-i Pr-i Pr-i Pr-i Pr-i	H H H H	Me Me Me Me Me	CH ₂ CH ₂ OPr-i CH ₂ CH ₂ OPr-i CHE tOH CHE tOMe CHE tOMe CHE tOMe	MeS MeSO Ms Ms C1 MeS	H H H H H H H
15	Pr-i Pr-i Pr-i Pr-i	H H H	Me Me Me Me Me	CHE tOMe CHE tOE t CHE tOPr-i CH 20CH 2CH 2OMe CH 2OCH 2CH 2OMe	MeSO Ms Ms Ms C1	H H
20	Pr-i Pr-i Pr-i Pr-i Pr-i	H H H	Me Ne Me Ne	CHzOCHzCHzOMe CHzOCHzCHzOMe CHzOCHzCHzOEt CHMeOCHzCHzOMe	MeS MeSO Ms Ms	H H H H
25	Pr-i Pr-i Pr-i Pr-i	H H H H	Me Me Me Me Me	CH≥O-Y8 CH≥O-Y9 CH≥O-Y1O CHMeO-Y8 CHMeO-Y9	Ms Ms Ms Ms Ms	H H H H
30	Pr-i Pr-i Pr-i Pr-i Pr-i	H H H H	Me Me Me Me Me	CHMeO-Y1O CHzO-Y13 CHMeO-Y13 CHzNHMe CHzNMez	Ms Ms Ms Ms Ms	H H H H
35	Pr-i Pr-i Pr-i Pr-i Pr-i	H H H H	Me Me Me Me Me	CHaME the CHaME ta CHa-Y14 CHMeMMea CHaCHaMMea	Ms Ms Ms Ms	H H H
40	Pr-i Pr-i Pr-i Pr-i Pr-i	Н Н Н	Me Me Me Me	CHzOCHzPh CHMeOCHzPh CHzOCHzCOzMe CHzOCHzCOzEt	Ms Ms Ms Ms Ms	Н Н Н Н Н
45	Pr-i Pr-i Pr-i Pr-i Pr-i	H H H H	Me Me Me Me Me Me	CH 20CHMeCO 2Me CH 2CN CHMeCN CH 2SMe CH 2SMe CH 2SMe CH 2SMe	Ms Ms Ms Ms C1 MeS	H H H H H

	A.	В	X	Υ .	Z	Q.
5	Pr-i	H	Иe	CH₂SMe	йeS0	H
	Pr-i	H	Мe	CH ₂ SE t	Ms	Ħ
	Pr-i	H	Ме	CH _z SE t	C1	Ĥ
	Pr-i	H	Иe	CH _z SEt	MeS	H
10	Pr-i	H	Мe	CH ₂ SEt	HeSO	Ĥ
	Pr-i	H	Мe	CH _z SOMe	Ms	H .
	Pr-i	H	Ме	CH ₂ SOE t	Ms	Ħ
	P - -i	H	Мe	CH ₂ SO ₂ Me	Ms	Ħ
	Pr-i	H	Иe	CH _z SO _z Me	Cl	Ħ
15	Pr-i	H	Ме	CH _z SO _z Me	MeS	H
	Pr-i	H	Иe	CH _z SO _z Me	MeSO	H
	Pr-i	H	Иe	CH ₂ SO ₂ Et	Ms	H
	Pr-i	H	Мe	CH ₂ SO ₂ Et	CI	H
20	Pr-i	H	Ме	CH _z SO _z Et	MeS	H
	Pr-i	H	Мe	CH ₂ SO ₂ E t	MeS0	H
	Pr-i	H	Йe	CHMeSMe	Ms	H
	Pr-i	H	Йe	CHMeSEt	Ms	H
	Pr-i	H	Иe	CHMeSOzMe	· Ms	H
25	Pr-i	H	Me	CHMeSO _z Et	Ms	H
	Pr-i	H	Мe	CH2SCH2CH2OMe	Ms	H
	Pr-i	H	Me	CH _z OCOMe	zK	H
	Pr-i	H	Мe	CH ₂ OCOE t	Ms	H
	P - -i	H	Мe	CHMe0C0Me	ar.	Ħ
30	Pr-i	H	Ме	CH ₂ OSO ₂ Me	Ms	H
	Pr-i	H	Мe	CH ₂ OSO ₂ Et	zК	нннннннннннннннннннннн
	Pr-i	H	Ме	CHMeOSO₂Me	its ·	H

₅ A Me Me	B H H	CI	Y	Z	Q.
Ме	H	CI	A		
Me Me ¹⁰ Me Me Me	H	CI CI CI CI CI CI	CH ₂ OH CH ₂ OMe CH ₂ OMe CH ₂ OMe CH ₂ OMe CH ₂ OMe CH ₂ OMe	Ms Ms Cl MeS MeSO Ms Ms	Н Н Н Н Н Q1
Me 15 Me Me Me	H H	C1 C1 C1 C1	CH ₂ OMe CH ₂ OMe CH ₂ OMe CH ₂ OMe	MeSO Ms MeS MeSO	91 92 92 92
Me Me ²⁰ Me Me Me	H H	C1 C1 C1 C1	CH ₂ OMe CH ₂ OMe CH ₂ OMe CH ₂ OMe	Ms MeS MeSO Ms	93 93 93 94
Me Me ²⁵ Me Me Me Me	H () H ()		CHz0Me CHz0Me CHz0Me CHz0Me CHz0Me CHz0Me CHz0Me CHz0Me	Ms Ms Ms Ms Ms	95 96 97 98 99
Me 30 Me Me Me Me Me	H - C		CH ₂ OE t CH ₂ OE t CH ₂ OE t CH ₂ OE t	Ms CI MeS MeSO Ms	99 H H H H Q1
	H C H C H	II (II (II (CH ₂ OEt CH ₂ OEt CH ₂ OEt CH ₂ OEt	MeSO MeSO Ms MeS MeSO	Q1 Q1 Q2 Q2 Q2
Me Me Me	H CH C	1 (CHzOEt CHzOEt CHzOEt CHzOEt	Ms MeS MeSO Ms	93 93 93 94
Me 45 Me Me Me	H C C H C C H C C C H C C C C C C C C C	1 0 1 0 1 0 1 0	CH2OEt CH2OEt CH2OEt CH2OEt CH2OEt CH2OPr-i	Ms Ms Ms Ms Ms Ms	95 96 97 98 99 H

5 -	<u>A</u>	<u> </u>	X	Y	Z	Ç.
3	Иe	H	Cl	CH _z OPr-i	Cl	H
	Иe	H	Cl	CH _z OPr-i	MeS	H H
	Мe	H	CI	CH₂OPr-i	MeS0	H
10	Me	H	C1	CHzOPr-i	Ms	Ql
70	Мe	H	C1	CH ₂ OP _T -i	lis	Q2
	lle	Ĥ	C1	CH₂OPr-i	' Ms	g3
	Me	H	Cl	CH ₂ OPr-n	Ms	н н н н н н н
	Me Me	H	CI	CH ₂ OPr-a	C1 MeS	H tr
15	Me	n n	Cl Cl	CH ₂ OPr-n CH ₂ OPr-n	MeSO	<u></u>
	Иe	H	CI	$CH_2OCH = CH_2$	Ms	H
	Me	Ħ	CI	$CH_2OCH = CH_2$	Cl	Ħ
	Иe	H H H H	Cl	CH ₂ OCH = CH ₂	MeS .	н
20	Me	H.	· Cī	$CH_2OCH = CH_2$	MeSO	H
	Иe	H	C1	CH ₂ OCH ₂ CH=CH ₂	zK	H
	Йe	H H	Cl	CH ₂ OCH ₂ CH=CH ₂	C1	H
	Иe	H	Çl	$CH_2OCH_2CH = CH_2$	MeS	H H H H
25	Йe	H H H	C1	CH 2OCH 2CH = CH2	MeSO	Ħ
	ile V-	H	Cl	CH _z OCH _z C ≡ CH	Ms	H
	Me Me	ц	CI	CH ₂ OCH ₂ C ≡ CH	CI Mass	11
	ne Ne	H H	Cl . ·Cl	CH ₂ OCH ₂ C ≡ CH CH ₂ OCH ₂ C ≡ CH	MeS MeSO	п u
	lle	H	CI	CH ₂ OCH ₂ CH ₂ CI	Ms Ms	H H H
30	Йe	H H	Cl	CH ₂ OCH ₂ CH ₂ Cl	CI	H
	Йe	Ħ	Ci	CH ₂ OCH ₂ CH ₂ C1	MeS	Ĥ
	Иe	H	Cl	CH ₂ OCH ₂ CH ₂ C1	MeS0	H
	Me	H	C1	CH 20CH 2CH 2Br	Ms	H H
35	Me	H	CI	CH 20CH 2CH 2CN	Ms	H
	Мe	H	C1	CH ₂ OAm-n	Иs	H
	Ме	H	CI	CH 20-Y5	Ms	H
	Me Me	H H	C1	CHMeOH	Ms Ms	H H
40	Me	n H	C1 C1	СНМеОМе СНМеОМе	Cl	H
	Me	H	Cl	CHMeOMe	MeS	H
	Me	H	CI	CHNeone	MeSO	Ĥ
	Me	Ĥ	Ci	СИЙеЭМе	Ms	Q1
45	Мe	H	ČÎ	СНМеОМе	Ms	Q2
	Мe	Н .	C1	CHMe0Me	Ms	g3
	Иe	H	Cl	CHMeOE t	Ms	H .
	Me	H	C1	CHMeOE t	CI	H

	A	В	X	Y	\overline{z}	
5				<u> </u>	4	Q .
•	Мe	H	CI	CHMeOE:	MeS	H
	Me	Ħ	CI	CHMeOEt	MeSO	Ħ
	Мe	H H	Cl	CHMeOEt	Ms	Q1
	Мe	H	CI	CHMeOEt	Ms	Q 2
10	Иe	Ħ	Cl	CHMeOEt	Ms	Q3
	Me	H	Cl	CHMeOPr-i	Ms	H
	Мe	H	C1	CHMeOPr-i	Cl	H H H H H
	Мe	H H	C1 ·	CHMeOPr-i	MeS	H
15	Мe	Ħ	C1	CHMeOPr-i	MeS0	H
	Мe	<u>H</u>	C1	CHMeOPr-n	Ms	H
	Мe	H	CI	$CHMeOCH = CH_z$	Ms	H
	Ме	<u>H</u>	C1	$CHMeOCH = CH_{z}$	Ms	H
	Me	H	CI	CHMeOCH _z CH = CH _z	Ms	H
20	Me .	H	CI	CHMeOCH ₂ C≡CH	Ms	H.
	Me	H H H H H	Cl	CHMeOCH ₂ CH ₂ CI	Ms	H
	Ме	H	Cl	CHMeO-Y5	Ms	H
	Me	н	CI	CMe ₂ OH	Ms	H
25	Me	H H H H	CI	CMe ₂ OMe	Ms	H H
	Me Me	п	C1	CMe = OMe	C1	H
	Me	п	CI.	CMezOMe	MeS	H
	Me	. u	CI CI	CMezOMe	MeS0	H
	Me	. H	CI	CMe _z OEt	Ms	H
30	Me	· H	CI CI	CMe ₂ 0Et	C1	H H
	Ме	H	G1	CMezOEt	MeS	H
	Me	H	CI	CMezOEt CMezOPr-i	MeSO	H
	Me	H	CI	CH ₂ CH ₂ OMe	eñ Ză	H
35	Мe	H	CI	CH ₂ CH ₂ OMe	C1	H
00	Ме	Ħ	C1	CH _z CH _z OMe	MeS	H.
	tie	Ħ	ČĪ	CH ₂ CH ₂ OMe	MeSO	H
	Мe	H	ČĨ	CH ₂ CH ₂ OE t	Ms	H
	Me	H	Ci	CH ₂ CH ₂ OEt	Ci	H
40	Мe	H	CI	CH ₂ CH ₂ OE±	MeS	H
	Мe	H	C1	CH ₂ CH ₂ OEt	MeSO	Ħ
	Мe	H	CI	CH ₂ CH ₂ OP _T -i	Ms	Ĥ
	Me.	H	CI	CH ₂ CH ₂ OP _T -i	CI	<u>H</u>
45	Мe	H	CI	CH ₂ CH ₂ OPr-i	MeS	H.
70	Me.	H	CI	CH ₂ CH ₂ OPr-i	MeS0	H ·
	Мe	H	C1	CHE tOH	Ms	H
	Йe	H	C1	CHE tOMe	Ms	H

	A	Б	X	Y	Z	Q
5	Ме	Ħ	Cl	CHE tOMe	Cl	H
	lle		CI	CHE tOMe	MeS	Ħ
	Ме	H H	Cl	CHE tOMe	MeSO	Ħ
	Me	u u	CI	CHE tOE t	Ms	Ħ
10	ne Me	H H	C1	CHE tOPr-i	Ms	Ħ
_	ne Ne	H	CI	CH _z OCH _z CH _z OMe	Ms	H H
		П 17		CH ₂ OCH ₂ CH ₂ OMe	Cl	17
	Me Ma	H	CI		MeS	H II
	Ме	H	CI	CH ₂ OCH ₂ CH ₂ OMe	MeSO	17
15	Me	H H H H	Cl	CH ₂ OCH ₂ CH ₂ OMe		II.
	Me	н	CI	CH ₂ OCH ₂ CH ₂ OEt	Ms M-	17 17
	Мe	Ħ	C1	CHMeOCH ₂ CH ₂ OMe	Ms V-	<u>π</u>
	Me	H	CI	CH ₂ O-Y8	, ns	п.
	Me	H H	C1	CH ₂ 0-Y9	Ms Ma	Д 17
20	Me	H	CI	CH ₂ 0-Y10	Ms	<u>п</u>
	Иe	. Н	CI	CHMeO-Y8	Ms	n
	Йe	\mathbf{H}_{\cdot}	CI.	CHMe0-Y9	Ms	H
	Мe	H	CI	CHMeO-Y10	Ms	H
	Me	H	C1	CH20-Y13	zľ.	H
25	Иe	H	Cl	CHMeO-Y13	zK	ннннннннннннннннннннннннн
	Мe	H	CI	CH zNHMe	Ms	Ħ
	йe	Н	C1	CH zliMez	Ms	H
	Me	H	. CI	CH zNE tMe	Ms	H
30	Мe	H	C1	CH ₂ NEt ₂	Ms	H
-	Иe	H	CI	CH ₂ -Y14	Ms	H
	Мe	H	C1	CHMeNMe _z	2M	H
	Мe	• Н	C1	CH ₂ CH ₂ NMe ₂	Ms	H
	Мe	H	CI	CH ₂ OCH ₂ Ph	гМ	H
35	Мe	H	C1	CHMeOCH _z Ph	Ms	H
	Мe	H	C1	CH ₂ OCH ₂ CO ₂ Me	Ms	H
	Нe	H	CI	CH2OCH2CO2Et	Ms	<u>H</u> :
•	Ме	H	CI	CH ≥0CHMeCO ≥Me	Ms	H.
	Мe	H	Cl	CH 2CN	Ms	H
40	Me	H	C1	CHMeCN	Ms	H
	Мe	H	Ci	CH₂SMe	Ms	
	Me	H ·	Cl	CH ₂ SMe	C1	H.
	Me	H	C1	CH ₂ SNe	MeS	H
45	Мe	H H	CI	CH ₂ SMe	MeSO	H
40	ite	Ħ	Č1	CH 2SE t	ds	H
	Me	Ĥ	CI	CHzSEt	C1	H H H H
	Me	H H	CI	CH ₂ SEt	MeS	H

5	<u>A</u>	В	X	Y	Z	Q
	Me	H	Cl	CH _z SEt	HeSO	H
	Иe	H	C1	CH ₂ SOMe	Ms	H
	Me	H	Cl	CH _z SOE t	Ms	H
10	Иe	H H	CI	CH z SO z Me	Ms	H .
	Me Me	П	Cl	CH ₂ SO ₂ Me	Cl	H
	ne Me	H	Cl	CH ₂ SO ₂ He	MeS	H
	ne Me	H H	C1	CH ₂ SO ₂ Me	MeS0	Ħ
	ne Me	n H	Cl	CH ₂ SO ₂ Et	Ms	H
15	ne Me	H	CI	CH2SO2Et	C1	H
	ne Me	n u	C1	CH ₂ SO ₂ £t	MeS	H
	Me	a u	C1	CH ₂ SO ₂ Et	MeS0	<u>H</u> .
	Иe	II.	CI CI	CHMeShe	Мs	H
20	Me	H H	C1	CHMeSE t CHMeSO zMe	Ms	H
	Мe	H H H H	CI	CHMeSO ₂ Et	Мs Мs	n u
	Мe	H	CI	CH _z SCH _z CH _z OMe	ns Ms	и. П.
	Мe	Ĥ	- CI	CH ₂ OCOMe	ns ms	ннининнинниннин
	Me	Ĥ	ČĪ	CH ₂ OCOEt	Ms	H H
25	Me	H H	ČĪ	CHMeOCOMe	iis Ms	H .
	Me	H	CI	CH₂OSO₂Me	Ms	H
	Мe	H	CI	CH20SO2Et	Ms	Ħ
	Me	H	CI	CHMeOSOzMe	Ms	Ħ
30	Et	H . H	CI	CH ≥OH	Ms	H
	Et	H	- · C1	CH₂0Me	Ms	H
	Et	H	C1	CH _z 0Me	CI	H
	Et	H	C1	CH 20Me	MeS	Н
0.5	Et	H	C1	CH _z 0Me	MeS0	H
35	Et.	H	C1	CH₂0Me	Ms	Q I
	Et Et	H	CI	CH _z OMe	MeS	<u> </u>
	Et	H .	C1	CH ₂ 0Me	MeS0	QI
	Et	H H	Cl Cl	CH ₂ OMe	Мs	Q2
40	Et	H	Cl	CH ₂ OMe	MeS	Q2
	Et	H	CI	CH₂OMe	MeSO	92 93
	Εż	H	CI	CH = OMe CH = OMe	Ms MeS	63
	Eż	H	CI	CH ₂ OMe	MeSO	e3
45	E: E:	H	CI	CH ₂ OMe	Ms	₫₹ ₽?
	Et	H	C1	CH ₂ OMe	Ms	9 5
	Et	H	Cī	CH _z OMe	Ms	96
	Et	H	C1	CH ₂ OMe	Ms	Q 7

5	A	В	X	Y	Z	Q.
5	Et	H	C1	CH _z OMe	Ms	98
	Et	H	CI	CH ₂ OMe	Ms	Q 9
	ΕÈ	Ħ	Cl	CH ₂ OE t	Ms	Н Н Н 69
	Et	H	CI	CH _z OEt	CI	Ĥ
10	Et Et	Ħ	ČĪ	CH _z OEt	MeS	Ħ
	Et	Ħ	CI	CH ₂ OEt	MeSO	<u>н</u>
	Et	Ħ	CI	CH ₂ OEt	Ms	äı
	Et	H	CI	CH ₂ OEt	MeS	Q1
	Et-	H	C1	CH ₂ OEt	MeSO	QI
15	Et	H	CI	CH ₂ OEt	Ms	Q2
	Et	H			MeS	Q 2
		Д 17	Cl	CH ₂ OEt		92
	Et	H H	Cl	CH ₂ OEt	MeSO	HZ
	Et	п	C1	CH _z OEt	Ms V-3	93
20	Et	Ħ	C1	CH = OE t	MeS	Q3
	Et	H	CI	CH 20E t	MeS0	Q 3
	Et	H -	C1	CH ≥OE ±	Иs	Q4 Q5
	Et	Ħ	CI	CH ₂ OEt	Ms	Q 5
25	Et	H	ÇI	CH ₂ OE t	Ms	96
23	Et	H	Cl	CH ₂ OEt	Ms	Q7
	Et	H	CI	CH ₂ OEt	Ms	8 9
	Et	H	C1	CH ₂ OEt	Ms	бд
	Et	H	. C1	CHzOPr-i	Ms .	H
30	Et	H	C1	CH2OPr-i	C1	Н Н Н
	Et	Ħ	CI	CH ₂ OPr-i	ReS	H
	Et	H	CI	CHzOPr-i	MeSO	H
	Et	H	Cl	CH ₂ OP ₇ -i	· Ms	Q1
	Et	H	C1	CH ₂ OPr-i	Ms	Q2
35	Et	H	Cl	CH ₂ OPr-i	Ms	Q3
	Et	H	Cl	CH ₂ OP _T -a	Ms	H
	Et	H	Cl	CHzOPr-n	C1	H
	Et	H	C1	CH ₂ OPr-a	MeS	H H H H
	Et	H	Cl	CH ₂ OPr-n	MeSO	H
40	Et	Ĥ	ĊĨ	$CH_2OCH = CH_2$	Ms	H
	Et	Ħ	ČÌ	CH=OCH = CHz	C1	H
	Et	Η̈́	či	CH ₂ OCH = CH ₂	MeS	Н
	Et	Ħ	Cl	CH2CH CH2	MeSO	H H H H
45	Et	H	Cl	CH ₂ OCH ₂ CH=CH ₂	Ms	H
45	Et	H	CI	$CH_2OCH_2CH = CH_2$	C1	H
	Et	H	C1	$CH_2OCH_2CH = CH_2$	MeS	H
	Et	H	C1	$CH_zOCH_zCH = CH_z$	MeSO	Ħ
		11	<u> </u>	011200112011-0112		

5	<u>A</u>	В	Х	Y	Z	Q.
-	Εt	H	C1	CH ₂ OCH ₂ C . ≡ CH	Ms	H
	Et	H H	CI	CH ₂ OCH ₂ C ≡CH	C1	Ħ
	Et	H	C1	CH ₂ OCH ₂ C ≡CH	MeS	Ĥ
10	Et	H H	C1	CH ₂ OCH ₂ C ≡CH	MeSO	H
10	Et	H	C1	CH 2OCH 2CH 2CI	Ms	H
	Et	H	C1	CH ₂ OCH ₂ CH ₂ Cl	C1	H
	Et	H	C1	CH2OCH2CH2CI	MeS	H
	Et	H	CI	CH 20CH 2CH 2CI	MeSO	Ħ
15	Εt	H	CI	CH ₂ OCH ₂ CH ₂ Br	Ms	H
	Εŧ	Ħ	C1	CH=OCH=CH=CN	Ms	H
	Εt	H	CI	CH ₂ OAm-a	Ms	$\widetilde{\mathtt{H}}$
	Et	H	CI	CH 20-Y5	Ms	Ĥ
	Et Et	H	Cl	CHMeOH	Ms	ннннннннн
20	Εt	H	C1	CHMeOMe	Ms	Ħ
	Et	H	Cl	СНМеОМе	C1	H H
	Εt	H	C1	CHMe0Me	MeS	H
	Et	H	CI	CHMeOMe	MeSO	H
	Εt	Н Н Н Н Н Н	CI	CHMeOMe	Ms	Q1
25	Et	H	CI	CHMeOMe	Ms	92
	Et	H	CI	CHMeOMe	Ms	92 93
	Et	H	CI	CHMeOEt	Ms	H
	Εt	H ·	CI	CHMeOEt	C1	H
30	Et	H	CI	CHMeOEt	MeS	H
	Et	H	CI	CHMeOEt	MeSO	H
	Et	H	CI	CHMeOEt	Ms	Ql
	Ét	H	CI	CHMeOE t	Ms	Q2
	Et	Н Н Н Н Н Н Н Н	C1	CHMe0E t	Ms	93
35	Et Et Et	H	CI	CHMeOPr-i	Ms	H
	Et	H	CI	CHMeOPr-i	Cl	H
	Εt	H	C1	CHMeOPr-i	MeS	H
	Εŧ	H	C1	CHMeOPr-i	MeS0	Н .
40	Et	H	CI	CHMeOPr-n	Ms	H H
40	Et	H	C1	CHMeOCH = CH ₂	Ms	H
	Εt	Ħ	Cl	CHMeOCH = CH ₂	Ms	H
	Et	H H	CI	CHMeOCH 2CH = CH 2	Ms	H
	Et Et	H	C1	$CHMeOCH_{z}C \equiv CH$	Ms	H ·
45	EĖ	H	C1	CHMeOCH 2CH 2C1	Ms	H
	Et	H	CI	CHMe0-Y5	Ms	H
	Et	H	Cl	CMe _z OH	Ms	H ·
	Et	H	CI	CMe ₂ 0Me	Ms	H

_	A	В	X	. Y	Z	Q
5	Et	H	Cl	CMe _z OMe	Cl	H
	Εt	H	CI	CMez0Me	MeS	Ĥ
	Et	H	CI	CMe _z OMe	MeSO	Ħ
	Et	Ħ	CI	CMez0Et	Ms	ਸ਼
10	Et	Ħ	ČĪ	CMe _z 0E [±]	Ċ1	អ៊
	Et	H	CI	CMe ₂ 0Et	MeS	ä
	Εt	Ħ	CI	CMez0Et	MeSO	n n
	Et	Ħ	CI	. CMezOPr-i	Ms	#
	Et	H	CI	CH ₂ CH ₂ OMe	Ms	11
15	Et	H H	Cl	CH ₂ CH ₂ OMe	CI	17
	Et	Ä.	Cl	CH ₂ CH ₂ OMe	MeS	11
	Et	H H H H	CI	CH ₂ CH ₂ OMe	MeSO	# H
	Et	u u	C1	CH ₂ CH ₂ OEt	Ms	11
20	Et	H	CI	CH ₂ CH ₂ OE t	CI	11 17
20	Et	H	C1		MeS	11 12
	Et	H		CH ₂ CH ₂ OEt		n T
	Et	H	C1	CH _z CH _z OEt	MeSO	п 11
	Et	n H	CI CI	CH ₂ CH ₂ OPr-i	Ms CI	П 13
25	Et	П U	CI	CH ₂ CH ₂ OP _T -i	CI MeS	
	Et	H H H	CI	CH ₂ CH ₂ OPr-i		<u>п</u>
	Et	П	CI	CH ₂ CH ₂ OPr-i	MeSO	H
	Et	<u></u>	C1	CHE tOH	Ms Y-	H
	Et	н Н -	C1	CHE tOMe	Ms CI	H
30	Et	H	Cl Cl	CHE ±0Me CHE ±0Me	Me\$	<u> </u>
	Et	H	CI	CHE tOME		п
	Et	n H	C1	CHE tOFE t	∦eSO	Н Н Н Н
	Et	H	C1 C1		Ms V-	<u>п</u> 11
35	Et	n H		CHE tOPr-i	Ms M-	n u
35	Et	H	C1	eMosHochco	Ms CI	H H . H
		n H	C1	CH ₂ OCH ₂ CH ₂ OMe	MeS	п.
	Et Et		CI CI	CH ₂ OCH ₂ CH ₂ OMe		n H
	Et	H . H	C1	CH2OCH2CH2OMe CH2OCH2CH2OEt	MeSO Ms	H
40	Et	H	CI		ns 2M	. <u>u</u>
	Et		CI	CHMeOCH ₂ CH ₂ OMe	ns Ms	H
		H	C1	CH ₂ 0-Y8		TI.
	Et Et	H	CI CI	CH 20 - Y9	ăs Ma	H H
		H	CI CI	CH _z 0-Y10	Ms Ma	n n
45	Et Et	H	CI.	CHMe0-Y8	Ms Ma	H H H
	EŁ	H	C1	CHMe0-Y9	žis Vo	и:
	Et	H	CI	CHMeO-Y1O	Ms Ms	<u> </u>
	<u> </u>	ū	Cl	CH2O-Y13	ns	14

		·				
5	<u>A</u>	В	Χ	Y	Z	Q.
10	eeeee eeeee	H H H H H	C1 C1 C1 C1 C1	CHMeO-YI3 CHzNHMe CHzNMez CHzNEtMe CHzNEtz CHz-YI4	Ms Ms Ms Ms Ms Ms	пнннннннннн
15	e e e e e e e e e e e e	H H H H	C1 C1 C1 C1 C1	CHMeNMez CH2CH2NHez CH2OCH2Ph CHMeOCH2Ph CH2OCH2CO2Me	Ms Ms Ms Ms Ms	H H H H
20	Et Et Et	H H H	C1 C1 C1 C1	CHzOCHzCOzEt CHzOCHMeCOzMe CHzCN CHMeCN CHzSMe	йs Из Из Из Из	H H H H
25	eeee eeee	H H H H	C1 C1 C1 C1 C1	CH≥SMe CH≥SMe CH≥SMe CH≥SEt CH≥SEt	CI MeS MeSO Ms CI	H H H H
30	Et Et Et Et Et	H . H H H	CI CI CI CI	CH _z SEt CH _z SEt CH _z SOMe CH _z SOEt	MeS MeSO Ms Ms	H H H
35	EEE	H H H	C1 C1 C1 CI	CH _z SO ₂ Me CH _z SO ₂ Me CH _z SO ₂ Me CH _z SO ₂ Me CH _z SO ₂ Et	Ms C1 MeS MeSO Ms	H H H H
40	Ett Et Et	Н Н Н Н	C1 C1 C1 C1 C1	CH ₂ SO ₂ Et CH ₂ SO ₂ Et CH ₂ SO ₂ Et CHMeSMe CHMeSEt	CI MeS MeSO Ms	H H H
45	E t t t t E t t	H H H H	C1 C1 C1 C1 C1	CHMESE t CHMeSOzHe CHMeSOzEt CHzSCHzCHzOMe CHzOCOMe CHzOCOEt	Ms Ms Ms Ms Ms Ms	H

	A	В	X	Y	7	Ç,
5	Et	H	CI	CHMeOCOMe	Мs	H
	Et Et	H	CI	CH 20S0 zMe	Ms	H
	Et Et	H H H	C1	CH ₂ 0S0 ₂ E±	Ms	H H H
10	Pr-i	<u> </u>	CI CI	CHMeOSO _z Me	Ms V-	H
	Pr-i	H	CI	CH 20H	Ms M-	n T
	Pr-i	- Н	CI CI	CH 20Me CH 20Me	Ms Cl	n u
	Pr-i	H	C1	CH 20Me	MeS	Н Н Н Н
15	Pr-i	H	ČĪ	CH ₂ OMe	MeSO	Ħ
/5	Pi	Ħ	ČĪ	CH₂0Me	Ms	Q1
	Pr-i	H	C1	CH = OMe	MeS	Q1 ·
	Pr-i	Ħ	Cl	CH _z ∂Me	MeSO	Q1
	Pr-i	H	Cl	CH₂0Me	Ms ·	92
20	Pr-i	H	CI	CH₂0Me	MeS	92
	Pr-i	H	Cl	CH ₂ OMe	HeSO	Q2
	Pr-i	H.	CI CI	CH ₂ 0Me	Ms M-S	Q 3
	Pr-i Pr-i	H	C1 C1	CH₂0Me CH₂0Me	MeS MeSO	9 3 9 3
25	Pr-i	H	C1	CH 20Me	Ms ·	· Q4.
	Pr-i	H	CI	CH ₂ OMe	ns 2K	Q 5
	Pr-i	Ħ	čî	CH₂0Me	Иs	Q 6
	P r -i	H	CI	CH 20Me	Ms	Q 7
30	Pr-i	H	CI	CH₂0Me	Ms	89
	Pr-i	H	Cl	CH ≥0Me	zK	g 9
	Pr-i	H .	C1	CH 20Et	Ms	H
	Pr-i Pr-i	H H	CI CI	CH ₂ OEt	CI .	H
35	Pr-i	<u>п</u>	CI CI	CH ₂ 0Et CH ₂ 0Et	MeS MeSO	H H
50	Pr-i	H	CI	CH ₂ OE t	Ms	Q1
	Pr-i	H	CI	CH ₂ OE t	MeS	Q1
	Pr-i	H	ČÌ	CH ₂ 0Et	· MeSO	QI
	Pr-i	H H	CI	CH = OE t	Ms	92
40	Pr-i	H	Cl	CH=0Et	MeS	92
	Pr-i	H	C1	CH ₂ OE t	neS0	Q2
	Pr-i	H	Cl	CH=0E t	. Ms	Q3
	Pi	H	CI	CH 20Et	MeS	83
45	Pr-i Pr-i	H	CI	CH ₂ OE t	MeSO .	Q3 Q4
	Pr-i	H H	CI CI	CHzOEt CHzOEt	Ms : Ms	Q5
	Pr-i	n H	C1 ·	CH ₂ OE t	ris Ms	Q 6
		14		OH SOE 6	1 144	

5	A	В	X	Y	z	Q.
10	Pr-i Pr-i Pr-i Pr-i Pr-i Pr-i	H H H H H	C1 C1 C1 C1 C1 C1	CH ₂ OEt CH ₂ OEt CH ₂ OEt CH ₂ OPr-i CH ₂ OPr-i	Ms Ms Ms Cl MeS	97 98 99 H H H
15	Pr-i Pr-i Pr-i Pr-i	H H H	CI CI CI CI	CH ₂ OPr-i CH ₂ OPr-i CH ₂ OPr-i CH ₂ OPr-i CH ₂ OPr-n	MeSO Ms Ms Ms	91 92 93
20	Pr-i Pr-i Pr-i Pr-i Pr-i	H H H	CI CI CI	CH ₂ OPr-n CH ₂ OPr-n CH ₂ OPr-n CH ₂ OCH = CH ₂	Ms C1 MeS MeSO Ms	H H H H
25	Pr-i Pr-i Pr-i Pr-i	H H H H	C1 C1 C1 C1 C1	CH ₂ OCH = CH ₂ CH ₂ OCH = CH ₂ CH ₂ OCH = CH ₂ CH ₂ OCH ₂ CH=CH ₂ CH ₂ OCH ₂ CH=CH ₂	CI MeS MeSO Ms C1	H H H H
30	Pr-i Pr-i Pr-i Pr-i Pr-i	H H H H	C1 C1 C1 C1 C1	CH ₂ OCH ₂ CH = CH ₂ CH ₂ OCH ₂ CH = CH ₂ CH ₂ OCH ₂ C = CH CH ₂ OCH ₂ C = CH CH ₂ OCH ₂ C = CH	MeS MeSO Ms Cl MeS	H H H
35	Pr-i Pr-i Pr-i Pr-i Pr-i	H H H H	C1 C1 C1 C1 C1	CH ₂ OCH ₂ C ≡CH CH ₂ OCH ₂ CH ₂ C1 CH ₂ OCH ₂ CH ₂ C1 CH ₂ OCH ₂ CH ₂ C1	MeSO Ms CI MeS	H H H H H H H H H H H H H H H H H H H
40	Pr-i Pr-i Pr-i Pr-i Pr-i	H H H H H	C1 C1 C1 C1	CH2OCH2CH2CI CH2OCH2CH2Br CH2OCH2CH2CN CH2OAm-n CH2O-Y5	MeSO Ms Ms Ms Ms	H H H H
45	Pr-i Pr-i Pr-i Pr-i Pr-i	H H H H H	CI CI CI CI CI	CHMeOH CHMeOMe CHMeOMe CHMeOMe CHMeOMe CHMeOMe	Ms Ms Cl MeS MeSO	H H H H
<u>.</u>				ATTICATIO	Ms	Q1

5	A	Б	Х	Y	Z	ę.
J	Pr-i	H	CI	CHMeOMe	Ms	92
	Pr-i	H	CI	CHMe0Me	Ms	Q3
	Pr-i	H	C1	CHMeOE t	Ms	
	Pr-i	H	C1	CHMeOEt	· C1	Ä
10	Pr-i	H	Cl	CHMeOE t	MeS	H H H H
	Pr-i	Ħ	CĪ	CHMeOE t	MeSO	Ħ
	Pr-i	Ħ	ČĪ	CHNeOE :	Ms	ä1
	Pr-i	H H H H	CI	- CHMeOEt	Ms	92
15	Pr-i	H	C1	CHMeOE t	Ms.	Q3
15	Pr-i	Ē	Cl	CHMeOPr-i	zK	Ħ
	Pr-i	Ĥ	Cī	CHMeOPr-i	C1	H H
	Pr-i	Ħ	Cl	CHMeOPr-i	MeS	Ħ
	Pr-i	Ħ	ČĪ	CHMeOPr-i	NeSO	Ħ
20	Pr-i	Ħ	Cì	CHMeOP:-a	Ms	H H
	P r -i	Ĥ	CÎ	CHMeOCH = CH ₂	iis Si	H
	Pr-i	H	CÎ	$CHMeOCH = CH_z$	Ms	H II
	Pr-i	Ĥ	ČĪ	CHMeOCH ₂ CH = CH ₂	en Sk	H
	Pr-i	Ħ	CI	CHMeOCH ₂ C=CH	iis Iis	H H
25	Pr-i	Ħ	ČĪ	CHMeOCH 2CH 2CI	Ms	H T
	Pr-i	Ĥ	CI	CHMe0-Y5	Ns	H H H H H
	Pr-i	Ħ	ČĪ	CMe ₂ OH	Ms	H
	Pr-i	Ħ	· CI	CMe = OMe	Ms	H
30	Pr-i	H	CI	CMe _z OMe	CI	Ħ
30	Pr-i	. Ħ	CI	CMe ₂ OMe	MeS .	Ħ
	Pr-i	Ħ	CI	CMe ₂ OMe	MeSO	H H
	Pr-i	H	ČÌ	CMe = OE t	Ms	H
	Pr-i	Ĥ	Cì	CMe _z OEt	C1	H
35	P r -i	Ë	ČÌ	CMe ₂ OE t	MeS	H
	Pr-i	Ä	CĨ	CMe _z OEt	MeSO	Ħ
	Pi	Ħ	ĊĬ	CMezOPr-i	Ms	H H H H
	Pr-i	H	CI	CH _z CH _z OMe	ris .	Ħ
	Pr-i	Ä	ČĨ	CH _z CH _z OMe	CI	Ħ
40	Pr-i	H	či	CH = CH = OMe	MeS	Ħ
	Pr-i	H	CI	CH _z CH _z OMe	MeSO	Ħ
	Pr-i	H	CI	CH ₂ CH ₂ OE t	Жs	H
	Pr-i	H	CI	CH ₂ CH ₂ OE t	CI	H
45	P r -i	Ä	CI	CH ₂ CH ₂ OE t	MeS	Ħ
+0	Pr-i	Ħ	CI	CH ₂ CH ₂ OE t	MeSO	H
	Pr-i	H	CI	CH ₂ CH ₂ OP _T -i	Ms	H
	Pr-i	Ĥ	Cl	CH ₂ CH ₂ OP _T -i	CI	H
		**	71	01150115011-1		

0 282 944

70 P P	Pr-i H Pr-i H Pr-i H Pr-i H Pr-i H Pr-i H Pr-i H	C1 C1 C1 C1 C1 C1	CH ₂ CH ₂ OP _T -i CH ₂ CH ₂ OP _T -i CHE tOH CHE tOMe CHE tOMe CHE tOMe CHE tOMe	MeSO Ms Ms CI MeS	нннннннннннн
70 P	7-i H 7-i H 7-i H 7-i H 7-i H	CI CI CI CI CI	CHE tOH CHE tOMe CHE tOMe CHE tOMe CHE tOMe	Ms Ms CI MeS	H H H H
10 P	7-i H 7-i H 7-i H 7-i H 7-i H	C1 C1 C1 C1	CHE ±0Me CHE ±0Me CHE ±0Me CHE ±0Me	Ms CI MeS	H H H
70 P P P	Pr-i H Pr-i H Pr-i H	C1 C1 C1 C1	CHE ±0Me CHE ±0Me CHE ±0Me	CI MeS	H H H
P	Pr-i H Pr-i H Pr-i H	CI C1 C1	CHE tOMe CHE tOMe	MeS	H
P	7-i H 7-i H 7-i H	C1 C1	CHE tOMe		
P	r-i H	C1		MeSO	й
	'i H		CHE tOE t	Ms	Ĥ
	J÷−i H	Cl	CHE tOPr-i	Ms	Ħ
		CI	CHzOCHzCHzOMe	Ms	H
ר ס	r-i H r-i H	CI	CH ₂ OCH ₂ CH ₂ OMe	C1	Ħ.
p.	r-i H	CI CI	CHzOCHzCHzOMe CHzOCHzCHzOMe	MeS MeSO	H-
	r-i H r-i H r-i H	ČĪ	CH ₂ OCH ₂ CH ₂ OEt	Ms Ms	п П
P:	r-i H	ČĨ	CHMeOCH 2CH 20Me	Ms .	Ħ
	r-i H	CI	CH 20- Y8	Ms	Ĥ
	r-i H r-i H r-i H	CI	. CH ₂ 0-Y9	Ms	. H
	r-i H r-i H	CI	CH ₂ O-YIO	lis	Ħ
	r-i H	CI CI	CHMeO-Y8	Ms	H
	r-i H	CI	CHMeO-Y9 CHMeO-Y10	Ms Ms	H
	r-i H	. C1	CH=0-110	ris Ms	H H
30 Pr	r-i H	CI	CHMe0-Y13	iis Is	H
	r-i H	CI	CH _z NHMe	Ms	Ħ
	r-i H	CI	CH ₂ NMe ₂	Ms	H
	r-i H	CI	CH zNE tMe	Ms	H
	r-i H r-i H	CI CI	CH 2NEtz	řís	H
	r-i H	CI	CH ₂ -Y14 CHMeNMe ₂	Ms Ms	Н Н Н
	r-i H	CI	CH ₂ CH ₂ NMe ₂	ns Ms	п И
	r-i H	Cī	CH ₂ OCH ₂ Ph	zĭi zĭi	Ħ
	r-i H	CI	CHMeOCH _z Ph	Ms	H
Pr		CI	CHzOCHzCOzMe	2M	H
_	r-i H	CI	CH=OCH=COzEt	Ms	H
	:-i H :-i H	CI	oms Och Mecos income	Ms	H
	-i H	CI CI CI CI	CH ₂ CN CHMeCN	Ms Ma	H H
	:-i H	CI	CHzSMe :	Ms Ms	n H
Pr	·-i H	ČĪ	CH ₂ SMe	CI	H
Pr	-i H	CI	CH _z SMe	MeS	Ħ

A	B	Χ .	Y	Z	Q.
Pr-i	H	C1	CH ₂ SMe	MeSO	H
Pr-i	H	CI	CH₂SEt	Ms	ä
P r −i	H	Cl	CH ₂ SEt	CI	H H H
Pr-i	H	Cl	CH _z SE t	MeS	H
Pr-i	H	C1	CHzSEt	MeS0	· ਸ
P r -i	H	CI	CH _z SOMe	Ms	H
Pr-i	H H H	C1	CH ₂ SOE t	Иs	H H H
Pr-i	H	CI	CH ₂ SO ₂ Me	Ms	H
Pr-i	H	C1	CH _z SO _z Me	Cl	H H
Pr-i	H	Cī	CH _z SO _z Me	MeS	Ħ
Pr-i	H	CI	CH ₂ SO ₂ Me	MeS0	n n
Pr-i	H	Cl	CH ₂ SO ₂ Et	Ms	Ħ
Pr-i	H H H H	ČĪ	CH ₂ SO ₂ Et	CĪ	H H H H
Pr-i	Ħ	.C1	CH ₂ SO ₂ Et	MeS	Ħ
Pr-i	H	CI	CH ₂ SO ₂ Et	MeS0	й.
Pr-i	Ħ	CI	CHMeShe	Ms	11
Pr-i	Ĥ	CI	. CHMeSEt	zk zk	II.
Pr-i	H	Cī	CHMeS0₂He	Ms	11
Pr-i	Ħ	CI	CHMeSO _z Et	Ms	H
Pr-i	H	Cī	CH2SCH2CH2OMe	Ms	H H H H
Pr-i	H	ĊĨ	CH ₂ OCOMe	Ms	H H
Pr-i	Ħ	Cī	CH ₂ OCOEt	Ms	H II
Pr-i	H H	CI	CHMeOCOMe	Ms	H H H
Pr-i	Ħ	ĊĨ	CH ₂ OSO ₂ Me	Ms	H H
Pr-i	Ħ	ČĪ .	CH ₂ OSO ₂ Et	ns 2N	H IT
Pr-i	Ħ	CÎ	CHMeOSO _{z:} Me	Ms	H

_	A	В	Х	Y	Z	Q,
5	Мe	H	CeK	CH 2OH	Ms	H
	Мe	Ħ	MeIJ	CH _z OMe	Ms	Н . Н Н Н .
	Ме	H	NeO	CH ₂ OMe	ČĪ	H
	Йe	Ĥ	MeO	CH ₂ OMe	MeS	Ħ.
10	Мe	H H	CeM	CH ₂ OMe	MeSO	Ħ
	Me	H	CeK	CH ₂ OMe	Ms	<u>ā</u> ī
•	Мe	H H H	MeO	CH ₂ OMe .	MeS	QI
	Мe	H	MeO	CH ₂ OMe	MeS0	QĪ
15	Мe	H	MeO	CH ₂ OMe	Ms	92
15	Me	H	MeO	CH ₂ OMe	MeS	92
	Me	H	CeM	CH _z OMe	MeS0	Q2 .
	Me	H	MeO	CH ₂ OMe	Ms	Q3
	Мe	H	MeO	CH ₂ OMe	MeS	93
20	Me ·	H	CeK	CH _z OMe	MeS0	93
	Йe	H	MeO	CH ₂ OMe	Ms	64
	Мe	H	Cen	CH _z OMe	Ms	95
	Me ·	H H H	MeO	CH ₂ OMe	- · · 2M · · ·	· Q 6 -
	Мe	• Н	MeO	CH _z OMe	Ms	97
25	Мe	H	MeO	CH ₂ OMe	Ms	98
	Me	H	CeM	CH _z OMe	Ms	99
	Мe	H	MeO	CH ₂ OE ±	Ms	H H H H
	Мe	H	CeK	CH ₂ OE t	C1	H
30	Me	H	MeO	CH20Et	MeS	H
	Мe	· Ħ	Celi	CH ₂ OE t	MeS0	
	Иe	H	MeO	CH ₂ OEt	Ms	QI
	Ме	H	MeO	CH ₂ OE t	MeS	Q1
	Ме	- Н	ЯeЭ	CH ₂ OEt	MeS0	01
35	Мe	H	MeO	CH ₂ OE t	Ms V-3	92
	Me	H	MeO	CH ₂ OEt	MeS	92
	Ме	H	MeO	CH _z OEt	MeSO	92 93
	Ме Ме	H . H	CeK	CH ₂ OE t	Ms MeS	83 83
40	ne Me	n H	MeO	CH _z OEt	MeSO	g 3
	Me	п Н	йe0	CH _z OEt	Ms	0.f
	ne Me		CeM	CH ₂ OEt		ี 82 สร สร
	Me	H H	MeO	CH ₂ OEt CH ₂ OEt	Ms Ms	08
	ne Me	n H	CeM CeM	CH ₂ OEt	Ms	Q7
45	ne Me	· H	neo NeO	CH _z OEt	ns Ms	Q8
	Me	H	CeM	CH ₂ OE t	Ms	60
	Me	H	MeO	CH _z OPr-i	Ms	H
	116	ц	เวอบ	OHZOLI - L	119	

	A	E	X	. Y	Z	
5	М-	et	N-O	CT OD :	Cl	
	Ме	H	MeO MeO	CH ₂ OPr-i	CI	H
	Me Me	H	MeO ·	CH ₂ OPr-i	MeS H-30	H H
	ne Me	H H H	CeK	CH ₂ OPT-i	йeS0	
40		п	йe0	CH ₂ OPr-i	Ms V	Q1
10	Ме	n n	Me0	CH ₂ OPr-i	Ms .	92
	Me	Ħ	ЖеО	CH ₂ OPr-i	Ms	g3
	Me	H	CeK	n-∓90₂KC	Ms	н н н н н н н н н н н н н н н
	Me	H	MeO	CH ₂ OPT-n	CI 2	H
15	Me .	H H H H	MeO	CH ₂ OP _T -n	MeS	H
	Иe	H	CeK	CHzOPr-a	MeSO	H
	Иe	H	MeO	$CH_2OCH = CH_2$	Ms	H
	Мe	Ħ	ЖeО	$CH_zOCH = CH_z$	C1	H
	Me	H	ЖeО	$CH_2OCH = CH_2$	MeS	H
20	Йe	Ħ	MeO	CH ₂ OCH = CH ₂	MeS0	H
	Иe	H	MeO	$CH_2OCH_2CH = CH_2$	Ms .	<u>H</u>
	Мe	H	MeO	$CH_zOCH_zCH = CH_z$	CI	H
	Me	H	MeO	$CH_2OCH_2CH = CH_2$	MeS	H
	Мe	H	MeO	$CH_2OCH_2CH=CH_2$	MeSO	<u>H</u> · · · -
25	Me	Ħ	ИeO	CH ₂ OCH ₂ C ≡CH	z <u>M</u> s	Ħ
	Мe	H	NeO	CH ₂ OCH ₂ C ≡CH	Cl	. Н
	Йe	H	MeO	CH ₂ OCH ₂ C ≡CH	MeS	H
	Me	H	MeO	$CH_zOCH_zC \equiv CH$	MeSO	H
30	Мe	H	MeO	CHzOCHzCHzC1	Ms	H
30	Мe	H	СеК	CHzOCHzCHzC1	Cl	H
	Иe	H	MeO	CH2OCH2CH2C1	MeS	Ħ ·
	Мe	H	MeO	CH2OCH2CH2C1	MeSO	H
	Йe	H	MeO	C#≤0-Y5	Ms	H
35	Me	H	. MeO	СНМеОН	Ms	H
	Мe	H	MeO	CHMeOMe	Ms	<u>H</u>
	Мe	H	MeO	CHMe0Me	Cl	H
	Иe	H	CeM	CHMe0Me	MeS	H
	Мe	H	MeO	CHMe0Me	MeS0	H
40	Мe	Ħ	CeM	СНМеОМе	Ms	Q1
	Me	H	ИeЭ	CHMeOMe	Ms	Q2
	Me	H	Сөм	CHMe0Me	Ms	ĞЗ
	Мe	H	Ceff	CHMeOE t	Ms	H
45	Ме	H	Ceff	CHMeOE t	C1	H
~~	Мe	H	· MeO	CHMeOE t	MeS	H
	Нe	H	MeO	CHMeOE t	MeS0	H
	Me	H	Me0	CHMeOE t	Ms	QI
		· · · · · · · · · · · · · · · · · · ·				

	<u>A</u>	В	X	Y	Z	. Q
5	Me Me Me Me	Н Н Н	MeO MeO MeO MeO	CHMeOEt CHMeOEt CHMeOPr-i CHMeOPr-i	Ms Ms Ms CI	92 93 H H
10	Me Me Me Me Me	Н Н Н Н Н	MeO MeO MeO MeO MeO	CHMeOPr-i CHMeOPr-i CHMeOPr-n CHMeOCH = CH ₂ CHMeOCH = CH ₂	MeS MeSO Ms Ms Ms	
15	Me Me Me Me Me	H H H H	MeO MeO MeO MeO	CHMeOCH ₂ CH = CH ₂ CHMeOCH ₂ C = CH CHMeOCH ₂ CH ₂ C1 CHMeO-Y5	Ms Hs Ms Ms	H H H
20	He He He . He	<u>н</u> н н	MeO MeO MeO MeO MeO	CMezOH CMezOMe CMezOMe CMezOMe CMezOMe	Ms Ms Cl MeS MeSO	Н Н Н Н
25	Me Me Me Me Me	H H H H	MeO MeO MeO MeO MeO	CMe ₂ OEt CMe ₂ OEt CMe ₂ OEt CMe ₂ OEt CMe ₂ OPr-i	Ms C1 MeS MeSO Ms	H H H H
30	Me Me Me Me	H H H H	MeO MeO MeO MeO	CH ₂ CH ₂ OMe CH ₂ CH ₂ OMe CH ₂ CH ₂ OMe CH ₂ CH ₂ OMe	Ms CI MeS MeSO	Н Н Н Н
35	Me Me Me Me Me	H H H H	MeO MeO MeO MeO MeO	CH ₂ CH ₂ OEt CH ₂ CH ₂ OEt CH ₂ CH ₂ OEt CH ₂ CH ₂ OEt CH ₂ CH ₂ OP _T -i	Ms CI MeS MeSO Ms	H H H H
40	Ие Ие Ие Ме	H H H H	MeO MeO MeO . MeO	CH ₂ CH ₂ OP _T -i CH ₂ CH ₂ OP _T -i CH ₂ CH ₂ OP _T -i CHE tOH	CI MeS MeSO Ms	H H H
45	Me Me Me Me	H H H H	Me0 Me0 Me0 Me0	CHE tOMe CHE tOMe CHE tOMe CHE tOMe	Ms C1 MeS MeSO	H H H H

5	A	В	X	Y	Z	Ç,
J	Ме	H	МеО	CAE tOE t	lis	• Н
	Иe	H	MeO	CHE tOPT - i	ils.	H .
	Мe	Н Н Н Н	CeM	CH ₂ OCH ₂ CH ₂ OMe	Ms	Ħ .
	Мe	H	MeO	CH2OCH2CH2OMe	CI	Ħ
10	Мe	H	Сей	CH2OCH2CH2OMe	MeS	Ħ
	Мe	H	MeO	CH ₂ OCH ₂ CH ₂ OMe	NeSO	អ៊
	Мe	H	MeO	CH2OCH2CH2OEt	Ms	Ħ
	Мe	H	MeO	CHMeOCH2CH2OMe	Ms	Ħ
15	Иe	H	MeO	CH20-Y8	zK	Ĥ
	Мe	H	CeK	CH ₂ O-Y9	zľ.	Ħ
	Мe	H	MeO	CH20-Y10	Ms	Ĥ
	Me	H	MeO	CHMe0-Y8	Ms ·	. Н
	Мe	H H	MeO	CHMeO-Y9	Ms	Ĥ
20	life	Ħ	Cen	CHMeO-Y10	Ms	H
	Мe	H	MeO	CH20-Y13	Ms	ннннннннннн
	Me	H	ИeО	CHMeO-Y13	Мs	H H -
	Me	Н	ОeM	CH zNHMe	Ms	Н -
25	Me	H H H	CeK	CH zWMez	Ms.	H H
	Ме	H	Ceff	CH 2NE tMe	Ms	Н · ·
	Ме	H H H	MeO	CH ₂ NEt ₂	Ms	Н Н Н Н
	Ме	Ħ	MeO	CH ₂ -Y14	Ms	H
	Йe	H	. MeO	CHMeNMe _z	Ms	H
30	Иe	H	МеО	CH ₂ CH ₂ NMe ₂	Ms	H
	Me	H	Ceff	CH ₂ OCH ₂ Ph	Ms	H
	Ме	H	MeO	CHMeOCH ₂ Ph	Мs	H
	Me Me	H	MeO	CH 20CH 2CO 2Me	Мs	H
35	rie Me	H H	ЖeO	CH ₂ OCH ₂ CO ₂ Et	Ms	H
33	Me	H	CeK	CH ₂ OCHMeCO ₂ He	ĭs v-	H H H H H
	Я́е	H	MeO MeO	CH≥CN CHMeCN	Ms	H H
	Me	H	MeO	CH ₂ SMe	Ms M-	п Н
	Me	H H	MeO	CH ₂ SMe	Ms CI	н Н
40	Me	H	MeO	CH 2SMe	XeS	n H
	Ме	H	MeO	CH ₂ SMe	MeSO	H
	Иe	H	MeO	CH _z SEt	Ms Ms	H .
	Иe	H	MeO	CH ₂ SEt	CI	H H
45	Иe	H	MeO	CH ₂ SEt	MeS	H
~>	Me .	H	MeO	CH _z SE t	MeSO	H
	Me	Ħ	MeO	CH ₂ SOMe	NS NESO	H
	Me	Ħ	MeO	CH ₂ SOEt	Ms	H
					11-3	

55

.1

5	A	В	X	Y	Z	Q
J	Мe	H	MeO	CH ₂ SO ₂ Me	Ms	H
	Me	Ħ	MeO	CH _z SO _z Me	ČĨ	Ħ
	Мe	H	MeO	CH 2 SO zMe	MeS	Ħ
	Me	H	MeO	CH ₂ SO ₂ Me	MeS0	Ħ
10	Йe	H H	ИeO	CH ₂ SO ₂ Et	Ms	H H H H
	Мe	H	MeO	CH ₂ SO ₂ Et	Ci	Ħ
	Me	H	MeO	CH2SO2Et	MeS	Ħ
	Мe	H	MeO	CH ₂ SO ₂ Et	MeSO	· Ħ
15	Мe	H	Me0	CHMeSMe	Ms	Ħ
, 0	Мe	H	йeЭ	CHMeSE t	Ms	Ħ
	Мe	H	Me0	CHMeSOzMe	Ms	Ĥ ·
	Мe	H	MeO	CHMeSO _z Et	Ms	Ħ
	Мe	Ħ	Me0	CH _z SCH _z CH _z OMe	Ms	ннннн
20	Me	H	MeO	CH ₂ OCOMe	Ms	H
	Me	H	MeO	CH2OCOEt .	Ms	H
	Иe	H.	MeO	CHMeOCOMe	Ms	н н н н н н
	Me	H	Me0	CH ₂ OSO ₂ Me	- Hs	. Н
25	Мe	H	MeO	CH2OSO2Et	ak	H
20	Мe	H	MeO	CHMeOSO ≥Me	Ms	H
	Et	H	MeO	CH ₂ OH	Ms	H
	Et	H	MeO	CH ₂ OMe	Ms	H
	Et Et	H H	. MeO	CH ₂ OMe	C1	H
30	Et	n H	MeO	CH ₂ OMe	MeS	H
•	Et	H	MeO MeO	CH 20Me CH 20Me	MeSO	H
	Et	H	MeO	CH ₂ OMe	Ms MeS	Q1 Q1
	Et	H	MeO	CH ₂ OMe	nes MeSO	61 61
35	Et	Ħ	CeM	CH ₂ OMe	Ms	92
	Et	Ħ	MeO	CH ₂ OMe	MeS	92
	Ēt	Ħ	NeO Ceff	CH ₂ OMe	MeSO	Q 2
	Et	Ħ	MeO	CH ₂ OMe	Ms	· Q3
	Et	H	MeO	CH₂OMe	MeS	Q3
40	Et	H	MeO	CH ₂ OMe	MeS0	Q3
	Et .	H	MeO	CH ₂ 0Me	Ms	94
	Εt	H	MeO	CH=0Me	Ms	Q 5
	Et	H H	MeO	CH _z OMe	Ms	96
45.	Et	H	Cell	CH _z OMe	Ms	Q 7
•	Et	H	MeO	CHzOMe	Ms	98
	Et	H	Me0	CH ₂ OMe	Ms	ã3
	Et	H.	MeO	CH ₂ OEt	Ms .	H

55 ·

Et H Me0 CH20Et MeS H Et H Me0 CH20Et MeSO H Et H Me0 CH20Et MeSO H To Et H Me0 CH20Et MeSO H To Et H Me0 CH20Et MeSO H To Et H Me0 CH20Et MeSO H To Et H Me0 CH20Et MeSO G Et H MeO CH20Et MeSO G Et H MeO CH20Et MeSO G Et H MeO CH20Et MeSO G Et H MeO CH20Et MeSO G Et H MeO CH20Et MeSO G Et H MeO CH20Et MeSO G Et H MeO CH20Et MeSO G Et H MeO CH20Et MeSO G Et H MeO CH20ET MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-i MeSO H Et H MeO CH20Pr-G ET H	5	A	Ξ	X	Y	Z	Q.
Et H MeO CH20Et MeSO H MESO H MESO H MESO H MESO H MESO H MESO H MESO H MESO H MESO H MESO H MESO H	J	Εż	Ħ	MeO	CH=OE t	CI	
Et H MeO CH₂OEt MeSO H MeSO H MeSO H MeSO H MeSO CH₂OEt MeSO H MeSO CH₂OEt MeSO GE H MeSO CH₂OET MESO GE H MeSO CH₂OET MESO GE H MeSO CH₂OET MESO GE H MeSO CH₂OPT-I MeSO GE H MeSO CH₂OPT-I MeSO GE H MeSO CH₂OPT-I MeSO GE H MeSO CH₂OPT-I MeSO GE H MeSO CH₂OPT-I MeSO GE H MeSO CH₂OPT-I MESO H MESO GE H MeSO CH₂OPT-I MESO H MESO GE H MESO CH₂OPT-I MESO H MESO CH₂O		Et	Ħ				H.
Et		Et	Ħ				H
Et H MeO CH2OEt Ms Q Et H MeO CH2OEt Ms Q Et H MeO CH2OEt Ms Q Et H MeO CH2OEt MeSO Q Et H MeO CH2OEt MeSO Q Et H MeO CH2OEt Ms Q Et H MeO CH2OFT MS MS H Et H MeO CH2OCH = CH2 MS B H Et H MeO CH2OCH = CH2 MS B H Et H MeO CH2OCH = CH2 MS B H Et H MeO CH2OCH = CH2 MS B H Et H MeO CH2OCH = CH2 MS B H Et H MeO CH2OCH = CH2 MS B H Et H MeO CH2OCH2CH = CH2 MS B H ET H MEO CH2OCH2CH = CH2 MS B H ET H MEO CH2OCH2CH = CH2 MS B H E		Et	H				21 .
Et H MeO CH2OEt Ms Q Et H MeO CH2OEt Ms Q Et H MeO CH2OEt Ms Q Et H MeO CH2OEt MeSO Q Et H MeO CH2OEt MeSO Q Et H MeO CH2OEt Ms Q Et H MeO CH2OFT MS MS H Et H MeO CH2OCH = CH2 MS B H Et H MeO CH2OCH = CH2 MS B H Et H MeO CH2OCH = CH2 MS B H Et H MeO CH2OCH = CH2 MS B H Et H MeO CH2OCH = CH2 MS B H Et H MeO CH2OCH = CH2 MS B H Et H MeO CH2OCH2CH = CH2 MS B H ET H MEO CH2OCH2CH = CH2 MS B H ET H MEO CH2OCH2CH = CH2 MS B H E	10	Ēż	Ħ				<u>0</u> 1
Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OPr-i Ms H. Et H MeO CH₂OPr-i Ms H. Et H MeO CH₂OPr-i MeS H. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeSO H. Et H MeO CH₂OCH = CH₂ Ms H. Et H MeO CH₂OCH = CH₂ Ms H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H.		Et					U.I.
Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OPr-i Ms H. Et H MeO CH₂OPr-i Ms H. Et H MeO CH₂OPr-i MeS H. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeSO H. Et H MeO CH₂OCH = CH₂ Ms H. Et H MeO CH₂OCH = CH₂ Ms H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H.		ĒĖ	Ħ				u5
Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OPr-i Ms H. Et H MeO CH₂OPr-i Ms H. Et H MeO CH₂OPr-i MeS H. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeSO H. Et H MeO CH₂OCH = CH₂ Ms H. Et H MeO CH₂OCH = CH₂ Ms H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H.		Et	Ħ				11.2 11.2
Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OPr-i Ms H. Et H MeO CH₂OPr-i Ms H. Et H MeO CH₂OPr-i MeS H. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeSO H. Et H MeO CH₂OCH = CH₂ Ms H. Et H MeO CH₂OCH = CH₂ Ms H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H.		Εt	Ħ		CH-OF t		02
Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OPr-i Ms H. Et H MeO CH₂OPr-i Ms H. Et H MeO CH₂OPr-i MeS H. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeSO H. Et H MeO CH₂OCH = CH₂ Ms H. Et H MeO CH₂OCH = CH₂ Ms H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H.	15	Et	Ħ		CH_0F+		03 85
Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OEt Ms Q. Et H MeO CH₂OPr-i Ms H. Et H MeO CH₂OPr-i Ms H. Et H MeO CH₂OPr-i MeS H. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-i Ms Q. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n Ms H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeS H. Et H MeO CH₂OPr-n MeSO H. Et H MeO CH₂OCH = CH₂ Ms H. Et H MeO CH₂OCH = CH₂ Ms H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H. Et H MeO CH₂OCH = CH₂ MeSO H.		Ēt	ਸ਼ੌ		+ 40-10		93
Et H MeO CH2OEt Ms Q Et H MeO CH2OEt Ms Q Et H MeO CH2OEt Ms Q Et H MeO CH2OEt Ms Q Et H MeO CH2OEt Ms Q Et H MeO CH2OEt Ms Q Et H MeO CH2OEt Ms Q Et H MeO CH2OEt Ms Q Et H MeO CH2OPT-I MS H Et H MeO CH2OPT-I MS H Et H MeO CH2OPT-I MeS H Et H MeO CH2OPT-I MeS H Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS Q Et H MeO CH2OPT-I MS H Et H MeO CH2OPT-I MS H Et H MeO CH2OPT-I MS H Et H MeO CH2OCH = CH2 MS H Et H MeO CH2OCH = CH2 MS H Et H MeO CH2OCH = CH2 MS H Et H MeO CH2OCH = CH2 MS H Et H MeO CH2OCH = CH2 MS H Et H MeO CH2OCH = CH2 MS H Et H MeO CH2OCH = CH2 MS H Et H MeO CH2OCH = CH2 MS H Et H MeO CH2OCH = CH2 MS H Et H MeO CH2OCH = CH2 MS H Et H MeO CH2OCH = CH2 MS H Et H MeO CH2OCH2CH = CH2 MS H		Ēt	Ħ		CH-OF+		63
Et H MeO CH2OEt Ms QUE Et H MeO CH2OEt Ms QUE Et H MeO CH2OEt Ms QUE Et H MeO CH2OEt Ms QUE Et H MeO CH2OEt Ms QUE Et H MeO CH2OEt Ms QUE Et H MeO CH2OET Ms QUE Et H MeO CH2OET Ms H MeO CH2OFT-I MS H MESO H MESO H MeSO H MeSO H MeSO H MeSO H MeSO H MeSO H MeSO H MeSO H MeSO H MeSO H MeSO H MeSO H MeSO H MeSO H MeSO CH2OPT-I MS QUE Et H MeO CH2OPT-I MS QUE Et H MeO CH2OPT-I MS QUE Et H MeO CH2OPT-I MS QUE Et H MeO CH2OPT-I MS QUE Et H MeO CH2OPT-I MS QUE Et H MeO CH2OPT-I MS H MeSO H MeSO H MeSO H MeSO H MeSO CH2OPT-I MS H MeSO CH2OPT-I MS H MeSO CH2OPT-I MS H MeSO CH2OPT-I MS H MeSO CH2OPT-I MS H MeSO CH2OPT-I MS H MeSO CH2OPT-I MS H MeSO CH2OPT-I MS H MeSO CH2OPT-I MS H MeSO CH2OPT-I MESO H MeSO CH2OCH = CH2 MS H MeSO CH2OCH = CH2 MS H MeSO CH2OCH = CH2 MS H MeSO CH2OCH = CH2 MeSO H MeSO H MeSO CH2OCH = CH2 MeSO H MeSO CH2OCH = CH2 MeSO H MeSO CH2OCH2CH = CH2 MESO CH2OCH2CH = CH2 MESO H MESO CH2OCH2CH = CH2 MESO CH2OCH2CH2CH2 CH2 MESO CH2OCH2CH2CH2CH2 MESO CH2OCH2CH2CH2CH2 MESO CH2OCH2CH2CH2CH2 MESO CH2OCH2CH2CH2CH2CH2 MESO CH2OCH2CH2CH2CH2CH2 MESO CH2OCH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2C		E±	ਸ		C3-05-5		24
Et H MeO CH2OEt Ms QUE Et H MeO CH2OEt Ms QUE Et H MeO CH2OEt Ms QUE Et H MeO CH2OEt Ms QUE Et H MeO CH2OET Ms QUE Et H MeO CH2OPT-I MS H ME Et H MeO CH2OPT-I MeS H MeS H MeO CH2OPT-I MeS H MeS H MeO CH2OPT-I MeSO H MeS H MeO CH2OPT-I MeSO H MeS H MeO CH2OPT-I MS QUE Et H MeO CH2OPT-I MS QUE Et H MeO CH2OPT-I MS QUE ET H MeO CH2OPT-I MS QUE ET H MeO CH2OPT-I MS QUE ET H MeO CH2OPT-I MS QUE ET H MeO CH2OPT-I MS QUE ET H MeO CH2OPT-I MS H MeSO CH2OPT-I MS H MeSO CH2OPT-I MS H MeSO CH2OPT-I MS H MeSO CH2OPT-I MESO H MeS H MeSO CH2OPT-I MESO H MESO H MeSO CH2OCH = CH2 MS H MeSO CH2OCH = CH2 MS H MeSO CH2OCH = CH2 MS H MESO CH2OCH = CH2 MESO H MESO H MESO CH2OCH = CH2 MESO H MESO CH2OCH = CH2 MESO H MESO CH2OCH2CH = CH2 MESO CH2OCH2CH = CH2 MESO CH2OCH2CH2CH2CH2CH2 MESO CH2OCH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2C	20	Et	Ħ				95
Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS H Et H MeO CH2OFT-I MS H Et H MeO CH2OFT-I MeS H Et H MeO CH2OFT-I MeS H Et H MeO CH2OFT-I MeS H Et H MeO CH2OFT-I MeSO H Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS H Et H MeO CH2OFT-I MS H Et H MeO CH2OFT-I MS H Et H MeO CH2OFT-I MS H Et H MeO CH2OFT-I MS H Et H MeO CH2OFT-I MeS H Et H MeO CH2OFT-I MESO H Et H MeO CH2OCH = CH2 MS H Et H MeO CH2OCH = CH2 MS H Et H MeO CH2OCH = CH2 MESO H Et H MeO CH2OCH = CH2 MESO H Et H MeO CH2OCH = CH2 MESO H Et H MeO CH2OCH2CH = CH2 MESO H		Et	Ħ		CH-OF +		96
Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS H Et H MeO CH2OFT-I MS H Et H MeO CH2OFT-I MeS H Et H MeO CH2OFT-I MeS H Et H MeO CH2OFT-I MeS H Et H MeO CH2OFT-I MeSO H Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS GE Et H MeO CH2OFT-I MS H Et H MeO CH2OFT-I MS H Et H MeO CH2OFT-I MS H Et H MeO CH2OFT-I MS H Et H MeO CH2OFT-I MS H Et H MeO CH2OFT-I MeS H Et H MeO CH2OFT-I MESO H Et H MeO CH2OCH = CH2 MS H Et H MeO CH2OCH = CH2 MS H Et H MeO CH2OCH = CH2 MESO H Et H MeO CH2OCH = CH2 MESO H Et H MeO CH2OCH = CH2 MESO H Et H MeO CH2OCH2CH = CH2 MESO H		Et	H .		CH_OF+		07
Et H MeO CH2OPr-i Ms H Et H MeO CH2OPr-i CI H Et H MeO CH2OPr-i MeS H Et H MeO CH2OPr-i MeSO H Et H MeO CH2OPr-i Ms GI Et H MeO CH2OPr-i Ms GI Et H MeO CH2OPr-i Ms GI Et H MeO CH2OPr-i Ms GI Et H MeO CH2OPr-n Ms H Et H MeO CH2OPr-n Ms H Et H MeO CH2OPr-n MeS H Et H MeO CH2OPr-n MeS H Et H MeO CH2OPr-n MeS H Et H MeO CH2OPr-n MeS H Et H MeO CH2OPr-n MeS H Et H MeO CH2OPR-n MeSO H Et H MeO CH2OPR-n MeSO H Et H MeO CH2OPR-n MeSO H Et H MeO CH2OPR-n MeSO H Et H MeO CH2OPR-n MeSO H Et H MeO CH2OPR-n MeSO H Et H MeO CH2OPR-N MeSO H Et H MeO CH2OPR-N MeSO H Et H MeO CH2OPR-CH2 MeSO H Et H MeO CH2OPR-CH2 MeSO H Et H MeO CH2OPR-CH2 MeSO H Et H MeO CH2OPR-CH2 MeSO H Et H MeO CH2OPR-CH2 MeSO H Et H MeO CH2OPR-CH2 MeSO H Et H MeO CH2OPR-CH2 MeSO H		Εŧ	ਸ਼ੋ		CH_OF+	Жe	98
Et H MeO CH2OPT-1 Ms H Et H MeO CH2OPT-1 CI H Et H MeO CH2OPT-1 MeS H Et H MeO CH2OPT-1 MeSO H Et H MeO CH2OPT-1 Ms GI Et H MeO CH2OPT-1 Ms GI Et H MeO CH2OPT-1 Ms GI Et H MeO CH2OPT-1 Ms GI Et H MeO CH2OPT-1 Ms GI Et H MeO CH2OPT-1 Ms H Et H MeO CH2OPT-1 Ms H Et H MeO CH2OPT-1 Ms H Et H MeO CH2OPT-1 Ms H Et H MeO CH2OPT-1 Ms H Et H MeO CH2OPT-1 MeSO H Et H MeO CH2OPT-1 MeSO H Et H MeO CH2OPT-1 MeSO H Et H MeO CH2OCH = CH2 CI H Et H MeO CH2OCH = CH2 CI H Et H MeO CH2OCH = CH2 MeSO H Et H MeO CH2OCH = CH2 MeSO H Et H MeO CH2OCH = CH2 MeSO H Et H MeO CH2OCH = CH2 MeSO H Et H MeO CH2OCH2CH = CH2 MeSO H		Εt	H		CH-0F t	Иe	00
### BET H MEO CH2OPT-I MS QUEET H MEO CH2OPT-I MS H MEO CH2OPT-I MS H MES H MEO CH2OPT-I MES H MES H MEO CH2OPT-I MES H MES H MEO CH2OPT-I MESO H MES H MEO CH2OPT-I MESO H MES H MEO CH2OPT-I MESO H MES H MEO CH2OPT-I MESO H MESO H MEO CH2OPT-I MS H MEO CH2OPT-I MESO H MESO H MEO CH2OPT-I MESO H MESO H MEO CH2OPT-I MESO H MESO H MESO H MESO H MESO H MESO H MESO H MESO H MESO CH2OPT-CH2 MESO H MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2CH=CH2 MESO H MESO CH2OPT-CH2CH2CH=CH2 MESO H MESO CH2OPT-CH2CH2CH=CH2 MESO H MESO CH2OPT-CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2C	25	Et	н		CH=OP==i		H .
### BET H MEO CH2OPT-I MS QUEET H MEO CH2OPT-I MS H MEO CH2OPT-I MS H MES H MEO CH2OPT-I MES H MES H MEO CH2OPT-I MES H MES H MEO CH2OPT-I MESO H MES H MEO CH2OPT-I MESO H MES H MEO CH2OPT-I MESO H MES H MEO CH2OPT-I MESO H MESO H MEO CH2OPT-I MS H MEO CH2OPT-I MESO H MESO H MEO CH2OPT-I MESO H MESO H MEO CH2OPT-I MESO H MESO H MESO H MESO H MESO H MESO H MESO H MESO H MESO CH2OPT-CH2 MESO H MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2CH=CH2 MESO H MESO CH2OPT-CH2CH2CH=CH2 MESO H MESO CH2OPT-CH2CH2CH=CH2 MESO H MESO CH2OPT-CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2C		Εt	Ħ		CH-OPT-i	CI	Ħ
### BET H MEO CH2OPT-I MS QUEET H MEO CH2OPT-I MS H MEO CH2OPT-I MS H MES H MEO CH2OPT-I MES H MES H MEO CH2OPT-I MES H MES H MEO CH2OPT-I MESO H MES H MEO CH2OPT-I MESO H MES H MEO CH2OPT-I MESO H MES H MEO CH2OPT-I MESO H MESO H MEO CH2OPT-I MS H MEO CH2OPT-I MESO H MESO H MEO CH2OPT-I MESO H MESO H MEO CH2OPT-I MESO H MESO H MESO H MESO H MESO H MESO H MESO H MESO H MESO CH2OPT-CH2 MESO H MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2CH=CH2 MESO H MESO CH2OPT-CH2CH2CH=CH2 MESO H MESO CH2OPT-CH2CH2CH=CH2 MESO H MESO CH2OPT-CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2C		Et	Ĥ		CH2OPr-i		Ħ
### BET H MEO CH2OPT-I MS QUEET H MEO CH2OPT-I MS H MEO CH2OPT-I MS H MES H MEO CH2OPT-I MES H MES H MEO CH2OPT-I MES H MES H MEO CH2OPT-I MESO H MES H MEO CH2OPT-I MESO H MES H MEO CH2OPT-I MESO H MES H MEO CH2OPT-I MESO H MESO H MEO CH2OPT-I MS H MEO CH2OPT-I MESO H MESO H MEO CH2OPT-I MESO H MESO H MEO CH2OPT-I MESO H MESO H MESO H MESO H MESO H MESO H MESO H MESO H MESO CH2OPT-CH2 MESO H MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2 MESO H MESO CH2OPT-CH2CH=CH2 MESO H MESO CH2OPT-CH2CH2CH=CH2 MESO H MESO CH2OPT-CH2CH2CH=CH2 MESO H MESO CH2OPT-CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2C		Et	H		CHaOPtai		Ħ
Et H MeO CH2OPT-I Ms QI Et H MeO CH2OPT-I Ms QI Et H MeO CH2OPT-n Ms H Et H MeO CH2OPT-n Ms H Et H MeO CH2OPT-n CI H 35 Et H MeO CH2OPT-n MeS H Et H MeO CH2OPT-n MeSO H Et H MeO CH2OCH = CH2 Ms H Et H MeO CH2OCH = CH2 CI H Et H MeO CH2OCH = CH2 MeSO H Et H MeO CH2OCH = CH2 MeSO H Et H MeO CH2OCH = CH2 MeSO H Et H MeO CH2OCH2CH=CH2 MS H Et H MeO CH2OCH2CH=CH2 MS H Et H MeO CH2OCH2CH=CH2 MS H Et H MeO CH2OCH2CH=CH2 MeSO H Et H MeO CH2OCH2CH=CH2 MeSO H Et H MeO CH2OCH2CH=CH2 MeSO H	20		Ĥ		CH=OP=-i		9 1
Et H MeO CHzOPr-i Ms QC Et H MeO CHzOPr-n Ms H Et H MeO CHzOPr-n C1 H 35 Et H MeO CHzOPr-n MeS H Et H MeO CHzOPr-n MeS H Et H MeO CHzOPr-n MeSO H Et H MeO CHzOCH = CHz Ms H Et H MeO CHzOCH = CHz C1 H Et H MeO CHzOCH = CHz MeS H Et H MeO CHzOCH = CHz MeSO H Et H MeO CHzOCH = CHz MeSO H Et H MeO CHzOCHzCH = CHz MeSO H Et H MeO CHzOCHzCH = CHz MeS H Et H MeO CHzOCHzCH = CHz MeS H Et H MeO CHzOCHzCH = CHz MeS H Et H MeO CHzOCHzCH = CHz MeS H	30		Ħ		CH ₂ OPr-i		<u> </u>
Et H MeO CH₂OPr-n Ms H Et H MeO CH₂OPr-n C1 H 35 Et H MeO CH₂OPr-n MeS H Et H MeO CH₂OPr-n MeSO H Et H MeO CH₂OCH = CH₂ Ms H Et H MeO CH₂OCH = CH₂ C1 H Et H MeO CH₂OCH = CH₂ MeSO H Et H MeO CH₂OCH = CH₂ MeSO H Et H MeO CH₂OCH = CH₂ MeSO H Et H MeO CH₂OCH₂CH = CH₂ Ms H Et H MeO CH₂OCH₂CH = CH₂ MeSO H Et H MeO CH₂OCH₂CH = CH₂ MeSO H Et H MeO CH₂OCH₂CH = CH₂ MeSO H Et H MeO CH₂OCH₂CH = CH₂ MeSO H Et H MeO CH₂OCH₂CH = CH₂ MeSO H			H		CH ₂ OP _T -i		Q3
Et H MeO CH2OPT-0 C1 H Et H MeO CH2OPT-0 MeS H Et H MeO CH2OPT-1 MeSO H Et H MeO CH2OCH = CH2 Ms H Et H MeO CH2OCH = CH2 C1 H Et H MeO CH2OCH = CH2 MeS H Et H MeO CH2OCH = CH2 MeS H Et H MeO CH2OCH = CH2 MeS H Et H MeO CH2OCH2CH= CH2 Ms H Et H MeO CH2OCH2CH= CH2 Ms H Et H MeO CH2OCH2CH= CH2 Ms H Et H MeO CH2OCH2CH= CH2 MeS H Et H MeO CH2OCH2CH= CH2 MeS H		Et	H		CH ₂ OP _T -a		H
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			H		CH ₂ OP _T -n		Ĥ
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	35		H		CH=OPr-n		H
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		Et	H		CH ₂ OPr-n		H
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		Et	H				H
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		Et	H		$CH_zOCH = CH_z$		H
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		Et	H		$CH_2OCH = CH_2$		H
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	40		H		$CH_2OCH = CH_2$		H
Et H MeO $CH_2OCH_2CH=CH_2$ C1 H Et H MeO $CH_2OCH_2CH=CH_2$ MeS H Et H MeO $CH_2OCH_2CH=CH_2$ MeSO H Et H MeO $CH_2OCH_2CH=CH_2$ MeSO H				MeO		Ms	
Et H MeO $CH_zOCH_zCH = CH_z$ MeSO H Et H MeO CH_zOCH_zC $\equiv CH$ Ms H			H	Ceff	$CH_zOCH_zCH = CH_z$		Н
Et H MeO $CH_zOCH_zCH=CH_z$ MeSO H Et H MeO CH_zOCH_zC $\equiv CH$ Ms H			H	MeO	CH2OCH2CH=CH2	MeS	H
	45		H		$CH_zOCH_zCH = CH_z$		H
			H	MeO	CH ₂ OCH ₂ C ≡CH		H
		Et	H	MeO	CH=OCH≥C ≡CH	C1	H
Et H MeO $CH_zOCH_zC = CH$ MeS H		Et	H	MeO	$CH_zOCH_zC = CH$	lleS	H

0 282 944

						· · · · · · · · · · · · · · · · · · ·
5	<u>.</u>	B	X	Y	· Z	Q,
	Et	H	NeO	CH ₂ OCH ₂ C ≡CH	MeSO	H
	Et	H	MeO	CH20CH2CH2CI	Ms .	<u> </u>
	Et	H	MeO	CH ₂ OCH ₂ CH ₂ CI	CI	17
	Et	Ħ	MeO	CH ₂ OCH ₂ CH ₂ CI	MeS	Π tr
10	Et	. ਜੌ	MeO	CH20CH2CH2C1	MeSO	<u>п</u> 17
	Et	ਸ	МеО	CH ₂ 0-Y5		п
	Εt	H H H H H	MeO	CHMeOH	Ms v-	П
	Et	H	MeO	Cilleon Cilleone	Ms Ms	H H H H H H H
	Et	H	MeO	Cimeone Cimeone	Ms	н.
15	Et	H II	neo Neo	Carreone Carreone	C1	Н
	Et	T II	CeM		MeS	H
	Et	Ħ II	MeO	CHY-OM-	ŊeS0	H
	Et	и.	MeO	CHMeOMe	Ms	Q1
20	Et	n n	MeO	CHMeOMe CHMeOMe	Ms	92
	Et	n n	MeO		Ms	Q 3
	Et	H H H H H H	MeO	CHMeOEt	Ms	H
	Et	- U	Me0	CHMeOEt CHMeOEt	CI	H H
	Et	ннннннннн	Meg	CHMeOEt	MeS	H
25	Εt	h H	MeO	CHMeOE:	MeSO	H
	Et	T,	MeO	CHMeOEt	Мs	Q1
	Et	n	MeO	CHMeOE t	Ms	92
	Et	H	Me0	CHMeOPr-i	Ms	9 3
	Ēŧ	н Н	MeO	CHMeOFT-I	Ms	ц
30	Et	H	MeO	CHMeOPr-i	C1	H TT
	Et	H H	MeO	CiMeOPr-i	MeS	H H H H
	Et	H	MeO	CHMeOPr-n	MeSO	Ħ II
	Et	H	MeO	$CHMeOCH = CH_{z}$	Ms	Д
35	Et	H	MeO	$CHMeOCH = CH_2$	Ms .	H H H
	F÷	H ·	He0	CHMeOCH ₂ CH = CH ₂	ils V	Π 17
	666 666 666 666 666 666 666 666 666 66	Ħ	MeO	CHMeOCH ₂ C ≡ CH	Ms Ms	H H H H
	F÷.	Ħ	MeO	CHMeOCH ₂ CH ₂ CI		П U
	Ε÷	H	MeO	CHMe0-Y5	Ms Ms	П U
40	F+	H	MeO	CMe _z OH		T.
	Ft	H	MeO	CMe=OMe	Ms M-	п Н
	Et	H	neo Me0	CMe:0Me	Ms CI	
	Et	H	neo MeO		C1	n u
45	·Et	H	MeO	CMe _z OMe CMe _z OMe	MeS	H H H H
45	Et	H	MeO	CAP UE:	MeSO	П .
	Et	H	neo MeO	CMezOEt	Ms CI	П u
	Et	H	neu Me0	CMe _z OEt CMe _z OEt	CI N-C	n H
		и.	1160	CHESOCE	MeS	а

_	<u>A</u>	В	X	Y	Z	Ć.
5	Et	H	МеО	CMezOE:	MeS0	ţŢ.
	Et	H	MeO	CMe _z OPr-i		H
	Et	Ĥ	MeO CeM	CH ₂ CH ₂ OMe	Иs	п
	Et	H	Me0	CI CII AV-	Ms	Ħ
,	Et	H		CH ₂ CH ₂ OMe	CI	ннннннн
•	Et		MeO	CH ₂ CH ₂ OMe	MeS	Н
		H	Çeğ	CH _z CH _z OMe	MeSO	Ħ
	Et	H	CeM	CH2CH2OEt	Ms	H
	Εt	. Н	CeM	CH _z CH _z 0E t	CI	H
5	Et	Ħ	Celt	CH ₂ CH ₂ OE t	MeS	H
	Et	H	0eM	CH ₂ CH ₂ OEt	MeSO	Ħ
	Et	H	MeO	CH2CH2OPT-i	Ms	Ĥ
	Et	H	Ceff	CH2CH2OPr-i	CI	Ħ
	Et	H	CeK	CH _z CH _z OP _T -i	MeS	· #
, `	Et	H	MeO	CH _z CH _z OPr-i	MeSO	Ħ
	Εt	H	MeO	CHE ±OH	ăs.	. H H H H
	Et	Ħ	NeO	CHE tOMe	Ms	H
	Et	Ħ	MeO	CHE toMe	Cl	H
	Et	Ħ	ile0	CHE tOMe	MeS	Q. Er
ĵ	Et	Ä	MeO	CHE tone	NeSO	· H
	Et	Ħ	MeO	CHE tone		H
	Et	Ħ	MeO	CHE tOPr-i	ils V	H
	Ēŧ	H.	. Cest		žs Ž	H
	Et	H H	Me0	CH ₂ OCH ₂ CH ₂ OMe	zK CJ	H
	Et	Ħ		CH ₂ OCH ₂ CH ₂ OMe	CI 2	H
	Et	H	MeO MeO	CH ₂ OCH ₂ CH ₂ OMe	MeS	· H
	Et	H	MeO	CH ₂ OCH ₂ CH ₂ OMe	MeS0	H
	Et	п Н	Me0	CH ₂ OCH ₂ CH ₂ OEt	Ms	H
	C t	П 17	MeO	CHMeOCH 2CH 20Me	Ms	H
	Et	H	MeO	CH 20- Y8	Ms ·	H
	Et	H	CeK	CH=0-Y9	Ms	H
	Es	H	MeO	CH20-Y10	2M	H
	Et	H	MeO	CHMeO-Y8	Ms ·	H
	Et	H H H H	MeO	CHMeO-Y9	- Ms	H
	Et	H	MeO	CHMeO-Y10	Ms	Н,
	Et	H	CeK	CH ₂ O-Y13	Ms	H
	Et Et	H H	MeO	CHMeO-YI3	Ms	H
	Et	H	MeO	CH _z NHMe	Ms	
	Εt	H	MeO	CHanner	lis	H
	Et	H	MeO	CHaNEthe	ZK	H
	Et	H	Me0	CHaWEtz	Ms	Ħ
	Et.	H	MeO	CHz-Y14	Ms	H

			77	••		
5	<u> </u>	B	X	Y	Z	Q
	Et	H	Oeff	CHMeNMe _z	Нs	H
	Et	- H H	MeO	CH _z CH ₂ NMe _z	Ms	Ħ
	Et	H	MeO	CH2OCH2Ph ·	Ms	Ħ.
10	Et	H	MeO	CHMeOCH _z Ph	Ms	Ħ
70	Et	H H	MeO	CH ₂ OCH ₂ CO ₂ Me	Ms	ਸੌ
	Et	H	MeO	CH2OCH2CO2Et	Ms	н
	Et	H	MeO	CH ₂ OCHMeCO ₂ He	Ms	Ĥ
	Et	H	MeO	CH₂CN	Ms.	Ħ
15	Et	H	Celi	CHMeCN	Ms	H
	Et	H	CeK	CH ₂ SMe	Ms	H
	Et	H	MeO	CH _z SMe	Cl	H
	Et	H H	MeO	CH ₂ SMe	MeS	H
	Et	H	MeO	CH₂SMe	MeS0	H
20	Et	H	MeO	CHzSEt	Ms	ннинниннинн
	Et	n H	MeO	CH ₂ SEt.	Cl	H
	Et [.]	Ħ	ЖеО	CH ₂ SEt	MeS	H
	Et Et	Н Н Н Н	ЖеО	CH ₂ SEt	MeS0	H
25	Et	<u>п</u> .	MeO	CH ₂ SOMe	Ms	H
	Et Et	п Н	MeO	CH ₂ SOE t	Ms	H
	Et	H	MeO	CH ₂ SO ₂ Me	Ms	H
	Et	H .	MeO MeO	CH ₂ SO ₂ Me	CI V	H
	Et	H	MeO	CHzSOzMe CHzSOzMe	MeS	H
30	Et	H	MeO	CH ₂ SO ₂ Et	MeSO	H
	Et	Ħ	МеО	CH ₂ SO ₂ Et	Иs CI	H
	Et	Ħ	МеО	CH ₂ SO ₂ Et	MeS	H
	Et	Ħ	MeO	CH _z SO _z Et	nes MeSO	H H
35	Et,	Ħ	HeO	CHMeSMe	Ms	H ·
	Et	H	MeO	CHMeSEt	Ms	H
	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	H	ЖeO	CHMeSO _z Me	Ms .	H
	Et	H	MeO	CHMeS0 zEt	Ms .	H.
40	Et	H	MeO	CH ₂ SCH ₂ CH ₂ OMe	Ms -	Ħ
40	Et	H	MeO	CH=OCOMe	Ms	Ħ
	Et	H	MeO	CH _z OCOE _t	Ms	H
	Et	H	MeO	СНМеОСОМе	Ms	H
	Et	H	MeO	CH=OSOzMe	zK	H
45	Et	H	MeO	CH ₂ OSO ₂ Et	Ms	H
	Et	H	MeO	CHMeOSO _z Me	Ms	H
	Pr-i	H	MeO	CH ₂ OH	Ms	H.
	Pr-i	H	MeO	CH ₂ OMe	Ms	H

	A	Б	X	Ÿ	Z	Q.
5	Pr-i	H	MeO	CH₂OMe	Cl	H
	Pr-i		MeO	CH _z OMe	MeS	H H
	Pr-i	H H H	Ceff	CH _z OMe	MeSO	H
	Pr-i	H	CeK	CH _z OMe	Ms	۵ī
10	Pr-i	Ħ	MeO	CH ₂ OMe	MeS	Q1
	Pr-i	H	NeO	CH₂0Me	MeSO	Ql
	Pr-i	H H	Ceff	CH ₂ 0Me	Ms	92
	Pr-i	Ħ	CeM	CH₂OMe	MeS	92
15	Pr-i	H	MeO	CH ₂ OMe	MeSO	92
15	Pr-i	H	MeO	CH ₂ OMe	Ms	Q 3
	Pr-i	H	MeO	CH ₂ OMe	MeS	Q 3
	Pr-i	H	Celí	CH _z OMe	MeS0	Q3
	Pr-i	H	MeO	CH₂OMe	2M	94
20	Pr-i	H	CeK	CH _z OMe	Ms	Q 5
	Pr-i	Ħ	MeO	CH _z 0Me	zň	96
	Pr-i	H	CeK	CH₂0Me	Ms	Q7
	Pr-i	H	MeO	CH ₂ OMe	Ms	<u>08</u>
	Pr-i	Ħ	MeO	CH = OMe	ZK ZK	
25	Pr-i	H	MeO	CH ₂ OE t	. Ms	· н
	Pr-i	H	CeM	CH ₂ OEt	CI	99 H H H
	Pr-i	H	· MeO	CH ₂ OE t	MeS	Ħ
	Pr-i	H	· MeO	CH _z OE t	HeSO	Ħ
30	Pr-i	H	ЙeО	CH ₂ OE t	Ms	ā1
	Pr-i	H	МеO	CH ₂ OE t	MeS	āī -
	Pr-i	H	MeO	CH ₂ OEt	MeS0	Qī
	Pr-i	H	MeO	CH ₂ OE t	ZK	<u> </u>
	Pr-i	H	MeO -	CH ₂ OE t	MeS	92
35	Pr-i	H	MeO	CH _z OE t	MeSO	92
	Pr-i	H	Me0	CH ₂ 0E t	Ms	93
	Pr-i	H	Cen	CH ₂ OE t	MeS	£9
	Pr-i	H	Me0	CH ₂ OEt	02eK	g3
40	Pr-i	H	Me0	CH ₂ OE t	Ms	94
40	Pr-i	H	MeO	CH ₂ OE t	Ms	9 5
	Pr-i	H	MeO	CH _z OE t	Ms	96
	Pr-i	H	MeO	CH=0E t	Ms	97
	Pr-i	H	CeK	CH 20E t	Ms	93
45	Pr-i	H	MeO	CH ₂ OEt	Ms	g 9
	Pr-i	H	MeO	CHzOPr-i	2M	H
	Pr-i	H	Me0	CHzOPr-i	CI -	Ħ
	Pr-i	H	Me0	CH ₂ OPr-i	MeS	H

5	A ·	B	X	Y	Z	Q
	Pr-i	H	ЖeO	CHzOPr-i	MeS0	77
	Pr-i	H	ЙeО	· CH ₂ OPr-i	Ms	H
	Pr-i	H	MeO	CH ₂ OP _T -i	. Ms	Q1
	Pr-i	Ħ	MeO	CH ₂ OP ₇ -i	Ms	Q 2
10	Pr-i	H H	MeO	CH ₂ OPT-n	ns Ms	Q3
	Pr-i	H	MeO	CH ₂ OPr-n	CI	H
	Pr-i	H	Йei	CH ₂ OP _T -n	MeS	n u
	Pr-i	H	MeO	CH ₂ OPr-a	MeSO	<u>п</u> п
15	Pr-i	H	ЙeО	$CH_zOCH = CH_z$	Ms	П U
,,	Pr-i	H	ЙeО	$CH_2 = CH_2$	CI	n
	Pr-i	H	NeO	$CH_2OCH = CH_2$	MeS	П И.
	Pr-i	H	MeO	$CH_zOCH = CH_z$	MeSO	п П
	Pr-i	H	MeO	CH ₂ OCH ₂ CH=CH ₂	.Ms	u.
20	Pr-i	H	NeO	CH ₂ OCH ₂ CH=CH ₂	C1	ii U
	P r -i	H	MeO	CH ₂ OCH ₂ CH=CH ₂	MeS	H H H H H H H H H H H H H H H H H H H
	Pr-i	H	MeO	CH ₂ OCH ₂ CH=CH ₂	HeSO	H
	Pr-i	H	MeO	CH ₂ OCH ₂ C ≡CH	Ms	· H
	Pr-i	H	MeO	CH ₂ OCH ₂ C ≡CH	CI	n n
25	Pr-i	H	Me0	CH ₂ OCH ₂ C ≡ CH	MeS	H
	Pr-i	H	MeO	CH ₂ OCH ₂ C ≡ CH	MeSO	n n
	Pr-i	H	MeO	CH=OCH=CH=C1	Ms	H H
	Pr-i	H .	MeO	CH2OCH2CH2C1	CI	H
30	Pr-i	H	MeO	CH2OCH2CH2C1	MeS	Ħ
	Pr-i	H	MeO	CH ₂ OCH ₂ CH ₂ C1	MeSO	H.
	Pr-i	H	MeO	CH20-Y5	Ms	H
	Pr-i	H	MeO	СНИеОН	Ms	Ħ
	Pr-i	H	ЖeO	СНМеОМе	ds	Ħ
35	Pr-i	H	MeO	CHMe0Me	CI	H H H H H H H H
	Pr-i	H .	MeO	CHMe0Me	MeS	Ħ
	Pr-i	H	MeO	СНИеОМе	MeS0	H -
	Pr-i	H	MeO	CHMe0Me	Ms	Q 1
40	Pr-i	H	MeO	CHMe0Me	Ms	92
70	Pr-i	H	MeO	CHMe0Me	Ms	63
	Pr-i	H	MeO	CHMe0Et	Ms	H
	Pr-i	H	MeO	CHMeOEt	Cl	H
	P=-i	H	йeЭ	CHMeOEt	MeS	H
45	Pr-i	H	MeO	CHMe0E t	MeSO	H
	Pr-i	H	MeO	CHMe0E t	Ms	Q 1
	Pr-i	H	MeO	CHMeOE t	-Ms	Q2
	Pr-i	H	MeO	CHMeOE t	Ms	Q3

Pr-i	5	A	В	Х	Y	Z	Ç,
Pr-i	J	Pr-i	H	MeO	CHMeOPr-i	Иs	H
Pr-i					CHHeOPr-i		H
Pr-i			Ĥ				Ĥ
Pr-i			Ħ				Ħ
Pr-i	10		$\widetilde{\mathtt{H}}$				ннннннннн
Pr-i			Ħ				អ៊
Pr-i			Ħ				Ĥ
Pr-i			Ĥ				Ħ
Pr-i	15		ਸ਼ੌ				Ħ
Pr-i	,,		Ħ				Ħ
Pr-i			й				Ħ
Pr-i			Ħ				Ħ
Pr-i			Ħ				Ħ
Pr-i H MeO CMezOEt MeS Pr-i H MeO CMezOEt MeSO Pr-i H MeO CMezOPr-i Ms Pr-i H MeO CMezOPr-i Ms Pr-i H MeO CMezCHzOMe Ms Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOEt Ms Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOPr-i Ms Pr-i H MeO CHzCHzOPr-i MeS Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHzCHzOMe Ms Pr-i H MeO CHEtOMe <	20		17				H H
Pr-i H MeO CMezOEt MeS Pr-i H MeO CMezOEt MeSO Pr-i H MeO CMezOPr-i Ms Pr-i H MeO CMezOPr-i Ms Pr-i H MeO CMezCHzOMe Ms Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOEt Ms Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOPr-i Ms Pr-i H MeO CHzCHzOPr-i MeS Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHzCHzOMe Ms Pr-i H MeO CHEtOMe <			n n				H H
Pr-i H MeO CMezOEt MeS Pr-i H MeO CMezOEt MeSO Pr-i H MeO CMezOPr-i Ms Pr-i H MeO CMezOPr-i Ms Pr-i H MeO CMezCHzOMe Ms Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOEt Ms Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOPr-i Ms Pr-i H MeO CHzCHzOPr-i MeS Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHzCHzOMe Ms Pr-i H MeO CHEtOMe <			11				ä
Pr-i H MeO CMezOEt MeS Pr-i H MeO CMezOEt MeSO Pr-i H MeO CMezOPr-i Ms Pr-i H MeO CMezOPr-i Ms Pr-i H MeO CMezCHzOMe Ms Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOEt Ms Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOPr-i Ms Pr-i H MeO CHzCHzOPr-i MeS Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHzCHzOMe Ms Pr-i H MeO CHzCHzOMe			11 12		CA- VE:		H H H
Pr-i H MeO CMezOEt MeSO Pr-i H MeO CMezOEt MeSO Pr-i H MeO CMezOPr-i Ms Pr-i H MeO CHzCHzOMe Ms Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOEt Ms Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOPr-i Ms Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHEtOMe Ms Pr-i H MeO CHEtOMe			II.				H
Pr-i H MeO CMezOEt MeSO Pr-i H MeO CMezOPr-i Ms Pr-i H MeO CHzCHzOMe Ms Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOEt Ms Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOPr-i Ms Pr-i H MeO CHzCHzOPr-i MeS Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHzOMe Ms Pr-i H MeO CHEtOMe Ms Pr-i H MeO CHEtOMe CI Pr-i H MeO CHEtOMe Me	25	rr-i	П 11				H
Pr-i H MeO CMezOPT-i Ms Pr-i H MeO CHzCHzOMe Ms Pr-i H MeO CHzCHzOMe C1 Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOEt Ms Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOPr-i Ms Pr-i H MeO CHzCHzOPr-i MeS Pr-i H MeO CHEtOMe Ms Pr-i H MeO CHEtOMe CI 45 Pr-i H MeO CHE			п		CY- OF:		П. U
Pr-i H MeO CHzCHzOMe Ms Pr-i H MeO CHzCHzOMe CI Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOEt Ms Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOPr-i Ms Pr-i H MeO CHzCHzOPr-i MeS Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHEtOMe Ms Pr-i H MeO CHEtOMe Ms Pr-i H MeO CHEtOMe MeS			n T		CHE OR :		H
Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOEt Ms Pr-i H MeO CHzCHzOEt MeS Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOPr-i Ms Pr-i H MeO CHzCHzOPr-i MeS Pr-i H MeO CHzCHzOPr-i MeS Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHEtOH Ms Pr-i H MeO CHEtOMe Ms Pr-i H MeO CHEtOMe MeS					Cite 20PT-1		H
Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOEt Ms Pr-i H MeO CHzCHzOEt MeS Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOPr-i Ms Pr-i H MeO CHzCHzOPr-i MeS Pr-i H MeO CHzCHzOPr-i MeS Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHEtOH Ms Pr-i H MeO CHEtOMe Ms Pr-i H MeO CHEtOMe MeS							н
Pr-i H MeO CHzCHzOMe MeSO Pr-i H MeO CHzCHzOEt Ms Pr-i H MeO CHzCHzOEt MeS Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOPr-i Ms Pr-i H MeO CHzCHzOPr-i MeS Pr-i H MeO CHzCHzOPr-i MeS Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHEtOH Ms Pr-i H MeO CHEtOMe Ms Pr-i H MeO CHEtOMe MeS	30				CH ₂ CH ₂ OMe		H H H
Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOPr-i Ms Pr-i H MeO CHzCHzOPr-i C1 Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHEtOH Ms Pr-i H MeO CHEtOMe Ms Pr-i H MeO CHEtOMe C1 45 Pr-i H MeO CHEtOMe MeS							H
Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOPr-i Ms Pr-i H MeO CHzCHzOPr-i C1 Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHEtOH Ms Pr-i H MeO CHEtOMe Ms Pr-i H MeO CHEtOMe C1 45 Pr-i H MeO CHEtOMe MeS					CH ₂ CH ₂ OMe		H H H
Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOPr-i Ms Pr-i H MeO CHzCHzOPr-i C1 Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHEtOH Ms Pr-i H MeO CHEtOMe Ms Pr-i H MeO CHEtOMe C1 45 Pr-i H MeO CHEtOMe MeS							. Ħ
Pr-i H MeO CHzCHzOEt MeSO Pr-i H MeO CHzCHzOPr-i Ms Pr-i H MeO CHzCHzOPr-i C1 Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHEtOH Ms Pr-i H MeO CHEtOMe Ms Pr-i H MeO CHEtOMe C1 45 Pr-i H MeO CHEtOMe MeS			H				H
Pr-i H MeO CH2CH2OPr-i Ms Pr-i H MeO CH2CH2OPr-i C1 Pr-i H MeO CH2CH2OPr-i MeS Pr-i H MeO CH2CH2OPr-i MeSO Pr-i H MeO CHE tOH Ms Pr-i H MeO CHE tOMe Ms Pr-i H MeO CHE tOMe C1 45 Pr-i H MeO CHE tOMe MeS	35		H				Ħ
Pr-i H MeO CH2CH2OPr-i C1 Pr-i H MeO CH2CH2OPr-i MeS Pr-i H MeO CH2CH2OPr-i MeSO Pr-i H MeO CHE tOH Ms Pr-i H MeO CHE tOMe Ms Pr-i H MeO CHE tOMe C1 45 Pr-i H MeO CHE tOMe MeS			H				H
40 Pr-i H MeO CH2CH2OPr-i MeSO Pr-i H MeO CH2CH2OPr-i MeSO Pr-i H MeO CHE tOH Ms Pr-i H MeO CHE tOMe Ms Pr-i H MeO CHE tOMe CI 45 Pr-i H MeO CHE tOMe MeS			H				H
Pr-i H MeO CHzCHzOPr-i MeSO Pr-i H MeO CHE tOH Ms Pr-i H MeO CHE tOMe Ms Pr-i H MeO CHE tOMe C1 45 Pr-i H MeO CHE tOMe MeS			H				H
Pr-i H MeO CH ₂ CH ₂ OPr-i MeSO Pr-i H MeO CHE tOH Ms Pr-i H MeO CHE tOMe Ms Pr-i H MeO CHE tOMe C1 45 Pr-i H MeO CHE tOMe MeS	40		H	CeK			Ħ
Pr-i H MeO CHE tOMe Ms Pr-i H MeO CHE tOMe CI 45 Pr-i H MeO CHE tOMe MeS	•			MeO	CH _z CH _z OPr-i		H
Pr-i H MeO CHE tOMe Ms Pr-i H MeO CHE tOMe CI 45 Pr-i H MeO CHE tOMe MeS		Pr-i	H	MeO	CHE tOH		H
45 Pr-i H MeO CHE tOMe MeS		Pr-i					H
45 Pr-i H MeO CHE tOMe MeS			H		CHE tOMe		H
	45					йeS	H
		Pr-i	H	MeO	CHE tOMe	MeSO .	H
Pr-i H MeO CHEtOEt Ms							H
Pr-i H MeO CHEtOPr-i Ms							H

						•
5	<u> </u>	E	X	Y	Z	ę.
	Pr-i	H	MeO	CH2OCH2CH2OMe	Ms	Н
	Pr-i	H	MeO	CH=OCH=CH=OMe	CI	u u
	Pr-i	H	MeO	CH2OCH2CH2OMe	MeS	n n
	Pr-i	H	CeM	CH 20CH 2CH 20Me	MeSO	H 17
10	Pr-i	H	MeO	CH2OCH2CH2OEt	Ms	· #
	Pr-i	H H	MeO	CHMeOCH 2CH 20Me	Ms.	Ħ
	Pr-i	H	MeO	CH20-Y8	Ms .	H 17
	Pr-i	H H	MeO	CH 20-Y9	Ms	H
15	Pr-i	Н	MeO	CH20-Y10	zK	Ħ
. •	P - -i	H	CeK	CHMe0-Y8	Ms	н.
	Pr-i	H	MeO	CHMeO-Y9	Ms.	Ħ
	Pr-i	H	CeM	CHMeO-Y10	iis	ਜੰ
	Pr-i	H	MeO	CH20-Y13	Ms	
20	Pr-i	H	CeM	CHMeO-Y13	Ms	Ä
	Pr-i	H	MeO	CH 2NHMe	Ms	Ĥ
	Pr-i	H	Ceff	CH ₂ NMe ₂	Ms ·	H H
	Pr-i	H	MeO	CH zNE tMe	Ms	- H
25	Pr-i	H	ИeО	CHzNEtz	Ms	- H H H H H
23	Pr-i	H	MeO	CH2-Y14	Ms	Ĥ
	Pr-i	H	MeO	CHMeNMe _z	Ms	H
	Pr-i	H	МeO	CH ₂ CH ₂ NMe ₂	Ms	H
	Pr-i	H	· MeO	CH2OCH2Ph	Ms	H
30	Pr-i	. Н	МеО	CHMeOCH _z Ph	Ms	H .
	Pr-i	H	Cell	CH ₂ OCH ₂ CO ₂ Me	Ms	H
	Pr-i	H	CeM	CH2OCH2CO2E:	Ms	H
	Pr-i	H	MeO	CH ₂ OCHMeCO ₂ Me	Ms	H
	Pr-i	H	CeM	CH ₂ CN	Ms	Н .
35	Pr-i	H	МеО	CHMeCN	Ms	H H H H H H
	Pr-i	H	MeO	CH ₂ SMe	Ms	H
	Pr-i	H	MeO	CH ₂SMe	Cl	H
	Pr-i	H	MeO	CH _z SMe	MeS	Ħ
40	Pr-i	H .	MeO	CH ₂ SMe	MeS0	H
	Pr-i	H	ЖеО	CH ₂ SE t	Ms	H
	Pr-i	H	MeO	CH ₂ SE t	C1	H
	Pr-i	H	MeO	CH ₂ SE t	MeS	H
	Pr-i	H	ЖеО	CH _z SE t	MeSO ·	H
45	Pr-i Pr-i	H	ЖeО	CH ₂ SOMe	Ms	H
	Pr-i	H	MeO	CH ₂ SOEt	Ms	H
	Pr-i	H H	MeO	CH2SO2Me	2M Co	H
	11-1	П	MeO	CH ₂ SO ₂ Me	CI	H

	A .	В	X	Y	Z	Q
5	Pr-i	H	MeO	CH _z SO _z Me	MeS	H
	Pr-i	H	NeO	CH ₂ SO ₂ Me	MeSO	H H H
	Pr-i	H	MeO	CH ₂ SO ₂ Et	Ms	H
	Pr-i	H	MeO	CH _z SO _z Et	C1	
	Pr-i	H	MeO	CH ₂ SO ₂ Et	ИeS	H
10	Pr-i	H	MeO	CH ₂ SO ₂ Et	MeSO	H
	Pr-i	H	Ceff	CHMeSMe	zK	H
	Pr-i	H	CeM	CHMeSEt	Ms	H
	Pr-i	H	Ceff	CHMeSO ₂ Me	Жs	H
5	Pr-i	H	CeM	CHMeSO ₂ Et	Иs	H
3	Pr-i	H	ИеО	CH2SCH2CH2OMe	Ms	H
	Pr-i	H	MeO	CH _z OCOMe	Ms	H
	Pr-i	H	MeO	CH ₂ OCOEt	Ms	H
	Pr-i	H	MeO	CHMe0C0Me	Ms	H
20	Pr-i		Ceff	CH2OSO2He	Ms	нннннянннн
	Pr-i	H H H	CeM	CH ₂ OSO ₂ Et	Ms	H
	Pr-i	H	MeO	CHMeOSO ₂ Me	ar	H

						•
_	<u>A</u>	Б	Х	Y	Z	Q .
5	Йe	Мe	M-	CH OH		
	Иe	Ме	Me Ma	CH ₂ OH	Ms	H H H H Q1
	Иe		Me.	CH ₂ OMe	Ms	H
	Иe	Ме	Ме	CH ₂ OMe	C1	H
10	Иe	Ме Ме	Me Y-	CH ₂ OMe	MeS	H
	Ме	ne Me	Me Y-	CH₂OMe	MeS0	H
	Me	ne Me	Me M-	CH₂OMe	Ms	
	Me	ne ne	Мe	CH ₂ OMe	C1	Q 1
	Ме		Ме	CH ₂ OMe	MeS	ΘI
15	ne Ne	Ме	Йe	CH₂OMe	CSeM	02 02
	ие Ме	Ме Ж-	Йe	CH _z OMe	MeS	9 2
	ие	йe У-	Йe	CH₂OMe	MeSO	92 93
	ne Me	Me Ma	Ме	CH₂OMe	Ms	Q3
	ne Me	Me	Иe	CH _z OMe	MeS	g3
20	ne Me	Me .	Йe	CH ₂ OMe	MeSO	Q3
		Йe	Ме	CH ₂ OEt	Ms	H
	Me	Йe .	Иe	CH _z OE t	C1	H H H
	Me Me	Me	Де	CH ₂ OEt	MeS	. Н
25	ne Me	ile V-	Йe	CH ₂ OEt	MeS0	
	ne Me	Me Y-	Иe	CH ₂ OE t	Ms	Q1
	ne Me	Ме	Ме	CH ₂ OEt	MeS	Q 1
	ne Me	Ме.	Ме	CH ₂ OEt	MeS0	Q1
	Me	Me .	- Me	CH ₂ OE ±	Ms	Q2
30 .	Me Me	Me V-	Ме	CH ₂ OE t	MeS	92
	ne Ne	Ме М-	- Me	CH ₂ OEt	MeSO	92
	ne Me	Ме	Ме	CH ₂ OEt	Ms	Q3
		Me M-	Ме	CH ₂ OE t	MeS	Q3
	Me	Жe .	Ме	CH ₂ OE t	MeSO	£3
35	Йe	Ме	Йe	CH2OP⊤-i	žis.	H
	Me **a	Me V-	Ме	CH₂OPr-i	C1	H H H
	île Y-	Ме	. Me	. CH ₂ OPr-i	MeS	Н
	Me Me	Ме ·	Мe	CH ₂ OPr-i	MeSO	
40	ĭle Ma	Ме	Ме	CH ₂ OPr-i	Ms	Q 1
-	Me	Ме	Ме	CH2OPr-i	Мs	Q 2
	Me	Ме	Ме	CH ₂ OPr-i	Ms	Q 3
	Ме	Ме	Ме	CH ₂ OP _T -n	a. Ms	H
	Me u_	Иe	Ме	$CH_zOCH = CH_z$	Ms	H H
45	Me	Нe	Йe	$CH_2OCH_2CH = CH_2$	Ms	H
	Me	Me	Ме	CH ₂ OCH ₂ C ≡CH	Ms	H
	Me	Ме	Ие-	CH2OCH2CH2C1	Ms	H
	Me	Me	Me	CH ≥O-Y5	Ms	H

5	A.	В	Χ	Y ·	Z	Q
5	Хe	Me	Мe	СНИеОН	дs	H
	Мe	Йe	Иe	CHMe0Me	Ms	Ħ
	Мe	Me	Йe	СНИеОМе	CI	H H H
	Me	Иe	Ме	СНМеОМе	MeS	Ħ
10	Me	Иe	Мe	СНМеОМе	MeS0	Ħ
	Me	Иe	Йe	СНМеОМе	Ms	Q1
	Me	Мe	Йe	СНИеОМе	Ms	Q 2
	Мe	Мe	Иe	CHMe0Me	Ms	QS
15	Йe	Йe	Мe	CHMeOE:	ris .	
	Me	Иe	Мe	CHMeOEt	C1	H H H H
	Ме	Иe	Иe	CHMeOE t	MeS	H
	Me	Иe	Мe	CHMe0Et ·	MeSO	
	Иe	Йe	Иe	CHMeOE t	lis	91
20	Me	Иe	Иe	CHMeOE:	Ms	92
	Йe	Йe	Мe	CHMeOE t	2M	£3
	Me	Иe	Иe	CHMeOPr-i	Ms	H H H H
	Иe	Мe	Мe	CHMeOPr-i	Cl	H
25	Me	Иe	Йe	CHMeOPr-i	MeS	<u>H</u>
25	Me	Ме	Иe	CHMeOPr-i	MeSO	H
	Йe	Me	Me	CHMeOPr-n	iis	H
	Йe	Ме	Мe	$CHMeOCH = CH_{2}$	Ms	H
	Йe	Me .	. Me	$CHMeOCH = CH_z$	2K	H
30	Ме	Ме	Жe	CHMeOCH ₂ CH = CH ₂	Ms	Ħ
	Йe	Ме	Ме	CHMeOCH _z C≡CH	Ms	H
	Иe	Ме	Ме	CHMeOCH ₂ CH ₂ Cl	Иs	H
	Иe	Me V-	Ме	CHMe0-Y5	Ms H	<u>п</u>
35	Ме	Ме	Ме	CMezOH	Ms M-	H H H
33	Me Me	Me	Ме	CMezOMe CMezOEt	ak ak	H
	He	Me Me	Me Me	CMezOPr-i	ns Ms	Ħ
	Me	Me	Ме	CH ₂ CH ₂ OMe	Ms	H
	iie iie	ne Ne	Me	CH ₂ CH ₂ OEt	Ms	H
40	Иe	Ме	ие	CH ₂ CH ₂ OP _T -i	ns 2M	H H
	lle	Иe	йe	CHE tOH	Ms	Ä
	Ме	Иe	Me	CHE tone	Ms	Ĥ
	Йe	Ме	.ie .ie	CHE tone	CI	H
46	Ме.	Me	Иe	CHE tOMe	MeS	. <mark>9</mark>
45	Me	Ме	Me	CHE tone	MeSO	H
	Мe	Ме	Me	CHE tOE t	Ms	Ĥ
	lle le	Иe	Me	CHE tOPr-i	Ms.	H
			110	2.12 241 1 - 1		

	A	B	X	Y	Z	Ç,
5	Me	Me	Me	CH ₂ OCH ₂ CH ₂ OMe	Ms	Ħ
	Me	Ме	Me	CH ₂ OCH ₂ CH ₂ OMe	C1	Ħ
	Me	ne Me	ие	CH ₂ OCH ₂ CH ₂ OMe	MeS	ннннннннн
	ne Me	ne Me	Me	CH ₂ OCH ₂ CH ₂ OMe	MeSO	ਸ
10	ne Me	Me Me	Me	CH ₂ OCH ₂ CH ₂ OEt	Ms	Ħ
	Ме	ne Ne	Me	CHMeOCH ₂ CH ₂ OMe	en Z	Ħ
	Ме	ne Me	ne Me	CH ₂ 0-Y8	ns S	Ħ
			ne Me	CH 20 - Y9	Ms	Ħ
	Ме	Иe	ne Me	CH ₂ 0-Y10	Ms	Ħ
15	Ме	Me M-		CHMeO-Y8	Ms	Й
	Ме	Йe	Me M-	CHMeO-Y9	Ms	h II
	Ме	Йe	Me		Ms	H II
	Me	Иe	Ме	CHMeO-Y10	ns Ms	H.
	Ме	Мe	Ме	CH ₂ 0-Y13	ns Ms ·	11 11
20	Ме	Ме	Me	CHMeO-Y13	ns Ms	H H H
	Me	Ме	Ме	CHallMea		п
	Me	Мe	Me	CH ₂ -Y14	Ms V-	11
	Me	Мe	Ме	CHMeNMe _z	Ms u_	H H
25	Me	Мe	Me	CH ₂ CH ₂ NMe ₂	Ms	II II
25	Иe	Мe	Me	CH2OCH2Ph	Ms	H H H H H
	Me	Мe	Ме	CHMeOCH ₂ Ph	Ms	П П
	Мe	Мe	Me	CH ₂ OCH ₂ CO ₂ Me	Ms	п
	Me	Ме ·	Ме	CH2OCH2COzEt	Ms	Π 17
30	Мe	Иe	Мe	CH20CHMeC0zMe	Ms	П !7
	Me	Мe	Me	CH ₂ CN	Ms	n 'Y
	Мe	Мe	Ме	CHMeCN	Ms	H H H
	Мe	Мe	Мe	CH ₂ SMe	Ms	H T
	Me	Мe	Ме	CH ₂ SMe	CI	H T
35	Me	Мe	Мe	CH ₂ SMe	MeS	H
	Мe	Мe	Ме	CH ₂ SMe	MeS0	H
	Me	Мe	Мe	CH ₂ SEt	Ms	H H H H H
	Me ·	Мe	Йe	CH₂SEt	CI	H
	Me	Мe	Ие	CH ₂ SE t	MeS	H
40	Me	Мe	Мe	CH₂SEt	MeS0	H
	Me	Мe	Мe	CH _z SOMe	Ms	
	Me	Мe	Мe	CH ₂ SOE t	Ms	H H H H H
	Me	Me	Ме	CH ₂ SO ₂ Me	Ms	H
45	Мe	Me	Me	CH ₂ SO ₂ Me	CI	H
	Me	Me	Me	CH _z SO _z Me	MeS	H
	Me	.He	Me	CH ₂ SO ₂ Me	MeSO	H
	Me	Иe	Me	CH ₂ SO ₂ Et	Ms	H

5	A	B	X	Y	Z	Q
5	Иe	Мe	Иe	CH ₂ SO ₂ Et	Cl	u
	Иe	Ме	Иe	CH ₂ SO ₂ Et	MeS	Д 11
	Мe	Me	Йe	CH _z SO _z Et	MeSO	Ä
	Me	Me	Иe	CHMeSMe	Ms	я п
10	Мe	Мe	Йe	CHMeSE t	Ms	n n
	Me	Ме	йe	CHMeS0 ≥Me	Ns	n H
	Me	Иe	Иe	CHMeSO ₂ Et	Ms	n T
	Ме	Ме	Иe	CH ₂ SCH ₂ CH ₂ OMe	Ms	h H
	Ме	Ме	Йe	CH ₂ OCOMe	Ns	H
15	Мe	Йe	Ме	CH ₂ OCOEt	Ms	Ħ
	Мe	Me	Мe	CHMeOCOMe	zK	Ħ
	Мe	Иe	lie ·	CH ₂ OSO ₂ Me	· Ys	Ħ
	Иe	Иe	Иe	CH ₂ OSO ₂ Et	Ms	нннининнинниннинн
20	Me	Me	Мe	CHMeOSO _z He	Hs.	·Ħ
	Et	Иe	Йe	CH ₂ OH	Мs	$\overline{\overline{H}}$
	Et	Иe	Йe	CH ₂ OMe	žš.	Ħ
	Et	Йe	Йe	CH _z OMe	C1	អ៊ី
	Et	Мe	Иe	CH ₂ OMe	MeS	Ħ
25	Et	Me	Йe	CH _z OMe	MeSO	Ħ
	Et	Иe	Йe	CH ₂ OMe	Ms	<u>q</u> 1
	Et	Мe	Мe	CH ₂ OMe	Cl	QI
	Et	Me '	Мe	CH ₂ OMe	MeS	Q1
30	Et	Мe	Me	CH ₂ 0Me	MeSO	92
	Et	Мe	Мe	CH _z 0Me	MeS	92
	Et	Мe	Йe	CH _z OMe	MeSO	Q2
	Et	Йe	Мe	CH ₂ OMe	Ms	Q3
	Ēt	Мe	Мe	CH₂0Me	MeS	es
35	Et	Me	Мe	CH₂0Me	MeSO	Q 3
	Et Et	Мe	Ме	CH ₂ OEt	Мs	H
	Et	Мe	Ме	CH ₂ OE t	Cl	Ħ
	Et	Ме	Ме	CH _z OEt	MeS	- Н
40	Et	Мe	Йe	CH _z OE t	MeS0	- Н
 0	Et	Ме	Мe	CH ₂ OE t	Ms	Q1
	Et	Ме	Мe	CH ₂ OE t	MeS	Q1
	Et Et	Ме	Ме	CH ₂ OE t	MeS0	Q1
	£5	Ме	Иe	CH ₂ OE t	Ms	92 92 92 93
45	Et	Мe	Иe	CH=0Et	MeS	42 00
	Et	Ме	Ме	CH ₂ OE t	MeS0	#Z
	Et	Me	Ме	CH ₂ OE t	Ms V-C	นว
	Et	lle	Иe	CH=OEt	MeS	93

						
5	A	. Б	Х	Y	Z	G.
3	Et	Мe	Ме	CH ₂ OE t	NeSO	63
	Et	Мe	Ме	CH ₂ OP _T -i	Ms	H
	Et	Me	йe	CH _z OPr-i	Cl	ii. U
	Εt	Me	Иe	CH ₂ OPr-i	MeS	II.
10	Et Et	Ме	Ме	CH ₂ OP _T -i		H H H Q1
	Et	Иe	Иe	CH ₂ OP _T -i	MeSO	11
	Ēŧ	Ме	Ме	CH ₂ OPr-i	Ms W-	#T
	Et	Иe	ne Me	CH ₂ OPr-i	Ms V-	92 93
	Et	Ме	ne Me	CH ₂ OPr-n	Ms M-	Щ. П
15	Et	lie	ne Me	CH OCH — CH	Мs	H
	Et	Me		$CH_zOCH = CH_z$	Ms V	Н
	Et		. Me	CH ₂ OCH ₂ CH=CH ₂	Ms	H ·
	Et	Me Me	Иe	CH ₂ OCH ₂ C ≡ CH	Жs	Ä
	Et	Me Y-	Иe	CH2OCH2CH2CI	. Ms	H
20	D.5.	Иe	Me	CH ₂ O-Y5	Ms	Я
	Et	де	Ме	СНИеОН	Ms	H
	Et	Мe	Me	CHMe0Me	Ms	H H H H H H H H
	ĒĖ	Me	Ме	CHMe0Me	C1	H
25	Et	Ме	Иe	CHMeOMe	MeS	H
	Et	Ме	Мe	CHMe0Me	MeSO	H
	Ēt	Ме	Me	CHMeOMe	Ms	Q1
	Et	Ме .	Me	СНМеОМе	Ms	92 93
	Et	Me	- Me	CHMe0Me	Ms	63
30	Et	Ме	Йe	CHMeOE t	Ms	H
	Et	Де	Ме	CHMeOE t	CI	H
	Et	Йe	Мe	CHMeOEt	MeS	H H H H
	Et	Ме	Me	CHMeOEt	MeSO	H
	Et	· Me	Йe	CHMeOE t	Ms	Q1 ·
35	Et	. Me	Мe	CHMeOE t	Ms	92 93
	Et	Де	Мe	CHMeOE t	Ms	63 °
	Ēt	Же	Ме	CHMeOPr-i	Μs	H H H H
	Et	Ме	Ме	CHMeOPr-i	CI	H
40	Εt	Ме	Me	CHMeOPr-i	MeS	Н.
40	Et	Me	Мe	CHMeOPr-i	MeS0	
	Εt	Ме	Мe	CHMeOPr-n	aK.	H
	Et	Me	Me	$CHMeOCH = CH_z$. Ys	H
	Et	Ме	Ме	$CHHe0CH=CH_z$	Ms .	Н.
45	Et	Мe	Мe	$CHMeOCH_zCH = CH_z$	гK	Н.
	Et	Йe	Ме	$CHMeOCH_{z}C = CH$	Ms	H ·
	Et	Me	Me	CHMeOCH zCH zCl	at the	H
	Et	Me	Me	CHMeO-Y5	Ms	H

5	<u>A</u>	5	X	Y	Z	Q
J	Et	Иe	Ме	CMezOH	Ms	H
	Εt	Мe	Иe	CMe ₂ OMe	Ms	Ħ
	Εt	Мe	Иe	CMe _z OEt	Ms	Ħ
	Et	Иe	Мe	CMezOPr-i	Ms	H
10	Et	Me	Йe	CH ₂ CH ₂ OMe	Ms	ннннннннн
	Et	Me	Йe	CH ₂ CH ₂ OE t	Ms	II.
	Et	Me	Йe	CH ₂ CH ₂ OPr-i	Ms	п
	Ēt	Me	Иe	CHE tOH	is Ns	п
_	Et	Мe	Иe	CHE tONe	ns Ms	П
5	Εt	Иe	Йe	CHEtOMe	C1	<u>п</u> 17
	Et	Me	Иe	CHE:ONe		п
	Et	Me	ие Ие	CHE tone CHE tome	MeS	п
	Et	ne Me			MeSO	H
0	Et		lle V-	CHE tOE t	Ms	H
0	Et	Ме	lfe	CHEtOPr-i) is	\overline{H}
		Мe	Ме	CH ₂ OCH ₂ CH ₂ OMe	Ms	H
	Et	life	Me	CHzOCHzCHzOMe	CI	H
	Et	Ме	ile	CH zOCH zCH zOMe	MeS	H
5	Et	Йe	Йe	CH2OCH2CH2OMe	MeS0	H
•	Et	Me	Иe	CH 20CH 2CH 2OE t	Ms	H
	Et	Иe	Мe	CHMeOCH 2CH 20Me	Ms	H H H H
	Et Et	Me	Иe	CH 20 - Y8	2M	H
	Et	Me .	Me	CH 20-Y9	Ms	H H H H H
)	Εt	Me	Иe	CH20-Y10	Ms	H
	Et	Мe	Иe	CHMeO-Y8	Ms	Ħ
	Et	Me	Йe	CHMeO-Y9	Ms	Ĥ
	Et	Мe	Мe	CHMeO-Y10	Ms	Ħ
	Εt	Мe	Мe	CH20-Y13	Ms	Ħ
5	Ε±	Иe	Ме	CHMeO-Y13	Ms	Ħ
	Et	Мe	Йe	CH = NMe =	Ms	Ħ
	Ēt	Me	Йe	CH2-Y14	Мs	Ħ
	Et	Me	Мe	CHMeNMe _z	zK	H H H
	Et	Me	Мe	CH zCH zNMez	Ms.	Ħ
•	Et	Me	Мe	CH ₂ OCH ₂ Ph	Ms 2K	H 17
	Et	Ме	Йe	CHMeOCH 2Ph	Ms	H
	Ēŧ	Ме	Йe	CH ₂ OCH ₂ CO ₂ He	Ms	H.
	Et	Ме	Ие	CH ₂ OCH ₂ CO ₂ Et	ris Ms	п. Н
	Et	Me	Ме	CT .0CW_C0 Y_		n u
	Et	ne Me		CH 20CHMeCO zMe	ys Y-	H
	Et	ne Me	Иe	CH ₂ CN	Ms M-	H
	Et		Me	CHMeCN	Ms M-	H
	<u> </u>	Me	Иe	CH₂SMe	Ms ·	H

	A	В	X	Y	Z	Ę.
5	Et	Ме	Мe	CH ₂ SMe	Cl	
	Et	Иe	Me ·	CH ₂ SMe	MeS	H
	Εŧ	Йe	Мe	CH ₂ SMe	MeSO	п
	Et	Ме	Мe	CH ₂ SEt	Ms	п.
10	Ēŧ	Me	Иe	CH ₂ SEt	C1	<u>п</u> .
	Et	Ме	Me	CH _z SE t	MeS	n u
	Et	Иe	Me	CH ₂ SE t	MeSO	n u
	Et	Йe	Ме	CH ₂ SOMe	Ms	H H H H H H
1.5	Εt	Иe	Me	CH _z SOEt	ns - Ms	<u>п</u> т
15	Et	Иe	Me	CH ₂ SO ₂ Me	ns Ms	п
	Ēŧ	Иe	Me	CH ₂ SO ₂ Me	CI	П IT
	Et	· Me	Ме	CH ₂ SO ₂ Me	MeS	П U
	Et	Ме	Me	CH ₂ SO ₂ Me	MeSO	H H H H
20	Et	Иe	ile ile	CH ₂ SO ₂ Et		п
	Et	Ме	He	CH ₂ SO ₂ Et	· Ms Cl	д.
	Et	Ме	Ие	CH ₂ SO ₂ E t		- H
	Et	Йe	Me	CH ₂ SO ₂ Et	MeS	H
	Et	Иe	Me	CHMeSMe	MeSO	n rr
25	Et	Me	Иe	CHMeSEt	Ms W-	H
	Ēŧ	Me	ne Me	CHMeSO _z Mě	Ms Ms	H
	Et	Иe	iie iie	CHMeSOzEt	ns Ms	H
	Et	Иe	· Me	CH ₂ SCH ₂ CH ₂ OMe	ns Ms	H
	ĒĖ	Ме	ile ile	CH ₂ OCOMe		H
30	Εt	Ме	Me	CH ₂ OCOEt	Ms Ms	H H
	E E E E E E E	Ме	Иe	CHMeOCOMe		n n
	Et	Иe	Ме	CH ₂ 0S0 ₂ Me	Ms Ma	H
	Εċ	Ме	Ме	CH ₂ OSO ₂ Et	Ms Ms	H
35	Et	Йe	ne Ne	CHMeOSO 2Me	Ms Ms	H
	Pr-i	Ме	Ме	CH ₂ OH	Ms -	H .
	Pr-i	Ме	.He	CH _z OMe	ns Ms	H
	Pr-i	Me	Me	CH ₂ OMe	C1	H
	Pr-i	Ме	Me	CH ₂ OMe	MeS	u u
40	Pr-i	Me	Me	CH ₂ OMe	nes MeSO	H
	Pr-i	Ме	. Me			H
	Pr-i	Me		CH ₂ OMe	Ms Ci	Q1
	Pr-i	ne Me	Мe	CH ₂ 0Me	CI W-S	Q1
	Pr-i	ne Me	Жe	CH 20Me	MeS	Q1
45	Pr-i	ne Me	Me Me	CH ₂ OMe	MeSO	Q2
	Pr-i	ne Me	Йe	CH ₂ 0Me	MeS	Q2
	Pr-i	ne Ne	lle No	CH ₂ OMe	MeSO	Q2
	11-1		lle	CH ₂ OMe	Ms .	Q3

•	A	В	X	Y	Z	Ę.
5	Pr-i	Йe	Ме	CH ₂ OMe	MeS	Q3
	Pr-i	Иe	Иe	CH ₂ OMe	MeSO	93
	Pr-i	Мe	Иe	CH ₂ OE t	Ms	
	Pr-i	Ме	Мe	CH _z OE t	C1	H H H
10	Pr-i	Ме	Мe	CH ₂ OE t	ЙeS	Ħ
	Pr-i	Me	Йe	CH ₂ OEt	MeSO	H
	Pr-i	Иe	Йe	CH ₂ OE±	Ms	ü 1
	Pr-i	Me	Йe	CH ₂ OEt	MeS	QI
	Pr-i	Me	Me	CH ₂ OEt	MeSO	Q1
15	Pr-i	Мe	Me	CH ₂ OEt	Ms	. 92
	Pr-i	Мe	Ме	CH ₂ OEt	MeS	92
	Pr-i	Me	Мe	CH ₂ OE±	MeSO	92
	Pr-i	Me	Me	CH ₂ OE ±	Ms	93
20	Pr-i	Me	Me	CH ₂ OE :	MeS	Q3
	Pr-i	Мe	Мe	- CH=OEt	MeSO	Q3
	Pr-i	Me	Мe	CH ₂ OPr-i	Ms	H
	Pr-i	Me	Мe	CHzOPr-i	CI	Ħ
	Pr-i	Мe	Me	i-rq0sED	MeS	H H H
25	Pr-i	Мe	Me	CH ₂ OPr-i	MeSO	H .
	Pr-i	Me	Me	CHzOPr-i	Ms	Q 1
	Pr-i	Иe	Me	CH ₂ OPr-i	Ms	92
	Pr-i	Ме -	Me	CH=OPr-i	Ms	Q3
30	Pr-i	Me .	Мe	CH ₂ OP _T -a	Ms	H
30	Pr-i	Me	Мe	$CH_zOCH = CH_z$	Ms	H H
	Pr-i	Мe	Me	CH ₂ OCH ₂ CH=CH ₂	Ms	Ħ
	Pr-i	Мe	Me	$CH_zOCH_zC \equiv CH$	Ms	Ħ
	P r -i	Мe	Me	CH2OCH2CH2C1	Ms	Ä
35	Pr-i	Мe	Мe	CH 20-Y5	Ms	H
	Pr-i	Me	Мe	CHMeOH	Ms	Ħ
	Pr-i	Иe	Мe	СНМеОМе	Мs	Ĥ
	Pr-i	Йe	Мe	СИМеОМе	C1	H ·
	Pr-i	Me	.Me	CHMeOMe	MeS	Ħ
40	Pr-i	Мe	Me	CHMeOMe	MeSO	Ĥ
	Pr-i	Мe	Мe	СНМеОМе	Иs	Q1
	Pr-i	Мe	Me	СЯМеОМе	Ms	<u>a2</u>
	Pr-i	Мe	Мe	CHMeOMe	Ms	93
45	Pr-i	Me	Мe	CHMeOE t	Ms	H
70	Pr-i	Иe	Ме	CHMeOEt	CI	Ħ
	Pr-i	Me	Me	CHMeOE t	MeS	H
	Pi	Иe	Мe	CHMeOE t	MeS0	H
			- · · - · · · · · · · · · · · · · · · ·			

		•				
5	A	В	X	Y	Z	Q
	Pr-i	He	Ме	CAMeOEt	V -	-
	P r -i	Ме	Ме	CHMeOEt	Ms	Q1
	Pr-i	Йe	Ме		Ms	Q2
	Pr-i	Me	Me	CHMeOEt	Ms	Q 3
10	Pr-i	Иe		CHMeOPT-i	Ms	H
	P . -i	ne Me	Ме Ч-	CHMeOPr-i	Cl	H
	Pr-i	ne Me	Ме	CHMeOPr-i	MeS	H
	Pr-i	ne Me	Ме	CHMeOPr-i	MeS0	H
	Pr-i		·Me	CHMeOPr-a	Ms	H
15	Pr-i	Мe	Ме	CHMeOCH = CH _z	Ms	H
	Pr-i	Ме	Ме	$CHMeOCH = CH_z$	Иs	H
		Ме	Ме	$CHMeOCH_zCH = CH_z$	Ms	H
	Pr-i	Me	Me	CHMeOCH ₂ C≡CH	Ms	H
00	Pr-i	Ме	Ме	CHMeOCH _z CH _z Cl	Ms	H
20	Pr-i	Иe	Иe	CHMeO-Y5	Ms	Ĥ
	Pr-i	Мe	Ме	CMe _z OH	Ms.	H
	Pr-i	Me	Мe	CMe _z OMe	Ms .	H
	Pr-i	Мe	Ме	CMe _z 0Et	.Ms	н н н н н н н н н н н н н н н н н н н
25	Pr-i	Me	Мe	CMezOPr-i	Ms	H. H
	Pr-i	Мe	Мe	CH ₂ CH ₂ OMe	Ms	H ·
	Pr-i	Иe	Мe	CH ₂ CH ₂ OEt	Ms	Ħ
	Pr-i	Мe	Иe	CH2CH2OPr-i	Ms	Ħ
	Pr-i	Мe	Me	CHEtOH	Ms	Ĥ
30	Pr-i	Me	Me	CHE tOMe	Ms ·	Ħ
	Pr-i	Мe	Мe	CHEtOMe	C1	Ħ
	Pr-i	Мe	Мe	CHE tOMe	MeS	Н Н Н Н
	Pr-i	Мe	Ме	CHEtOMe	MeSO	Ħ
	Pr-i	Йe	Йe	CHEtOEt	Ms	Ĥ
35	Pr-i	Йe	Ме	CHE tOPi	Ms	Ħ
	Pr-i	Мe	Мe	CH2OCH2CH2OMe	Ms	H
	Pr-i	Мe	Мe	CHzOCHzCHzOMe	CI	Ħ
	Pr-i	Мe	Мe	CH ₂ OCH ₂ CH ₂ OMe	MeS	Ħ
40	Pr-i	Мe	Мe	CH zOCH zCH zOMe	MeSO	Ħ
+∪	Pr-i	Мe	Me	CH2OCH2CH2OEt	Иs	H
	<u>Pr-i</u>	Ме	Me	CHMeOCH = CH = OMe	Ms	Ĥ
	Pr-i	Me	Йe	CH 20-Y8	Ms	H
	Pr-i	Мe	Мe	CH 20- Y9	Ms	Ĥ
45	Pr-i	Мe	Me	CH ₂ O-YIQ	Ns.	
	Pr-i	Иe	Мe	CHMeO-Y8	Ms	H.
	Pr-i	Me	Мe	CHMe0-Y9	Ms	H H H
	Pr-i	Мe	Me	CHMeO-Y10	Ms ·	H
					114	11.

	A	В	X	Y	Z .	Q
5	Pr-i	Мe	Me	CH ₂ 0-Y13	Ms	H
	Pr-i	Иe	Иe	CHMeO-Y13	zK	Ħ
	Pr-i	Ме	Мe	CH 2NMez	гK	Ĥ
	Pr-i	Ме	Йe	CH 2- Y14	Ms	H H H H H H H
10	Pr-i	Ме	Мe	CHMeNMe _z	Ms	Ħ
	Pr-i	Йe	Ме	CH zCH zNMez	Ms	Ħ
	Pr-i	Иe	Мe	CH ₂ OCH ₂ Ph	zľi	H
	P r -i	Ме	Мe	CHMeOCH ₂ Ph	Мs	H
15	Pr-i	Йe	Йe	CH ₂ OCH ₂ CO ₂ Me	Ms	H
	Pr-i	Иe	Йe	CH2OCH2CO2Et	Ms	Ħ
	Pr-i	Me	Ие	CH zOCHMeCO zMe	Ms	H
	Pr-i	Иe	Ие	CH ₂ CN	Ms	H
	Pr-i	Мe	Me	CHMeCN	Ms	H _.
20	Pr-i Pr-i	Ме	Me	CH _z SMe	Ms	H.
	Pr-i	ile	Мe	CH _z SMe	C1	H
	Pr-i	Иe Ма	Иe	CH₂SMe	MeS	H
	Pr-i	Me Me	Ме	CH ₂ SMe	MeSO	Ħ
25	Pr-i	ne Me	Ме	CH ₂ SEt	Ms	H T
	Pr-i	ne Me	Me . Me	CH ₂ SEt	CI	H H H H H H H H
	Pr-i	Ме	ne Me	CH ₂ SEt CH ₂ SEt	MeS MeSO	n u
	Pr-i	Me	. Me	CH ₂ SOMe	nesu Ms	п Н
•	Pr-i	Иe	Me	CH ₂ SOEt	ns Ms	П, U
30	Pr-i	Иe	Иe	CH ₂ SO ₂ Me	ns 2K	H H
	Pr-i	Ме	Иe	CH _z SO _z Me	CI	H
	Pr-i	Мe	Ме	CH ₂ SO ₂ Me	MeS	H
	Pr-i	Me	Ме	CH _z SO _z Me	MeSO	H
35	Pr-i	Иe	Йe	CH ₂ SO ₂ Et	žš	Ħ
	Pr-i	Мe	Me	CH _z SO _z Et	CI	Н Н Н
	Pr-i	Мe	Ме	CH _z SO _z Et	MeS	H
	Pr-i	Мe	Йe	CH ₂ SO ₂ Et	MeS0	H
	Pr-i	Ме	Мe	CHMeSMe	Ms	H
40	Pr-i	Иe	Мe	CHMeSEt	zК	H
	Pr-i	Иe	Мe	CHMeSO zMe	Ms	H
	Pr-i	Me	Мe	CHMeSO _z Et	ZK.	H
	Pr-i	Мe	Иe	CH _z SCH _z CH _z OMe	Ms	H
45	Pr-i	Мe	Me	CH _z OCOMe	Ms .	H
	Pr-i	Йe	Me	CH ₂ OCOE t	Ns .	H
	Pr-i	Me	lle	CHMeOCOMe	zK.	H
	Pr-i	Иe	Ме	CHzOSOzMe	Ms	H ·
	Pr-i	Ме	Ме	CH20S02Et	Ms	H ·
50	Pr-i	Ме	Me	CHMeOSO zMe	Ms .	H

	<u>A</u>	В	X	Y	Z	Q.
5	Иe	Ме	Cl	CH₂OH	V .	
	Иe	Иe	CI	CH ₂ OMe	Ms M-	H
	Мe	Иe	CI	CH₂OMe	Ms Cl	<u>II</u> IT
	Иe	Йe	Ci	CH _z OMe	MeS	n or
10	Ие	Мe	CÏ	CH ₂ OMe	MeSO	H H H H
	Мe	Йe	CI	CH ₂ OMe	Ms	ĞĪ
	Мe	Ме	C1	CH ₂ OMe	.CI	Q1
	Me	Мe	Cl	CH ₂ OMe	MeS	₫Ĭ
15	Me	Мe	CI	CH₂OMe	MeSO	92
. •	Мe	Йe	C1	CH _z OMe	MeS	92
	Me	Ме	CI	CH₂OMe	MeS0	Q2
	Ме	Me	C1	CH _z OMe	Ms	93
	Мe	Ме	CI	CH ₂ OMe	MeS	9.3
20	Иe	Ме	C1	CH ₂ OMe	MeSO	Q3
	Me Me	Me Y-	CI	CH ₂ OE t	Ms	Ħ
	ne Me	Me	C1	CH ₂ OEt	CI	H - H
	Me	йе Ме	CI	CH ₂ OE t	MeS	<u>H</u>
25	Me	ne Me	CI CI.	CH ₂ OEt	MeSO	H
	Иe	Me	C1.	CH ₂ OEt	Ms Ma	QI
	Me	Иe	CI	CH 2OE t CH 2OE t	MeS	Q1
	Me	Йe	CI	CH ₂ OEt	MeSO Ms	Q1
	Me	Ме	CI	CH ₂ OEt	ris MeS	Q2 Q2
30	Me	Me	Cī	CH ₂ OEt	MeSO	Q2
	Me	Me	CI	CH ₂ OEt	a Ms	Q3 .
	Me	Мe	CI	CH ₂ OE:	MeS	Q3
	Мe	Мe	C1	CH ₂ OE t	MeSO	Q 3
35	Me	Мe	C1	CHzOPr-i	Ms	H
	Дe	Мe	C1 -	CHzOPr-i	CI	H.
	Ме	Мe	C1	CH ₂ OPr-i	MeS	H .
	Ме	Ме	C1	CHzOPr-i	MeS0	H
40	Me	Йe	C1	CHzOPr-i	Ms	Q 1
70	Me	Me	CI	CH=OPr-i	Ms	<u> 92</u>
	Me Me	Me	C1	CH=OPT-i	Мs	<u>g</u> 3
	ne Me	Ме Ме	C1	CH ₂ OP _T -n	Ms.	H H
	ne Ne	ne Ne	CI	$cH_{2} = H_{3} = H_{3}$	Ms V	H
45	Me	ne Me	CI CI	CH = OCH = CH = CH z	Ms *-	H ·
	Me	ne Me	CI	CH ₂ OCH ₂ C ≡CH CH ₂ OCH ₂ CH ₂ C1	Ms Ms	H
	Me	Иe	C1	CH ₂ O-Y5	Ms Ms	H H
			<u> </u>	01120-10	112	11

	A	E	Х	Y	Z	Q.
5	Мe	Me	Cl	CHMeOH	Мs	TT .
	Me	Me	CI	CHMeOMe	ns Ms	H H H H
	Мe	Ме	C1	CHMe0Me	C1	n n
	Ме	Me	Cl	CHMeOMe	ДеS	TI II
10	Ме	Иe	Cl .	CHMe0Me	HeSO	11
-	Иe	Me	CI .	CHMe0Me	Ms	<u>0</u> 1
	Ме	ite	C1	CHMeOMe	ns Ns	92
	Me	Me	C1	CHMe0Me	ns Ms	Q 3
	Йe	Иe	CI	CHMeOE t	iis As	n an
15	Иe	Ие .	Cl	CHMeOE t	C1	n. m
	Мe	Иe	CI	CHMeOE t	MeS	ä ii
	Me	Иe	Cl	CHMeOE t	MeSO	H H H
	Мe	Иe	CI	CHMeOE t	Ms	äı
20	Me	Иe	C1	CHMeOE t	ek ek	92
20	Me	Ме	CI	CHMe0Et	Ms	23
	Ме	Иe	CI	CHMeOPr-i	Ms	H C
	Мe	Иe	CI	CHMeOPr-i	ĊĨ	Ħ
	Мe	Иe	ČĪ	CHMeOPr-i	MeS	H H H H H H H H H H
25	Йe	Ме	ČĪ	CHMeOPr-i	MeSO	Ħ
	Йe	Йe	či	CHMeOPr-n	Ms	Ħ
	Me	Мe	CI	CHMeOCH = CH ₂	ZK	Ĥ
	Me	Мe	· CI	CHMeOCH = CH _z	Ms	Ħ
	Me	Me	C1	CHMeOCH _z CH = CH _z	ZK	Ħ
30	Иe	Me	. C1	$CHMeOCH_zC = CH$	Ms	H
	Me	Ме	C1	CHMeOCH ₂ CH ₂ C1	Ms	H
	Me	Me .	C1	CHMe0-Y5	Ms	H
	Мe	Ме -	CI	CMezOH	Ms	H
35	Мe	Иe	C1	CMe z0Me	Ms	H
	Йe	Me	C1	CMe _z 0Et	Ms ,	H H H H
	Йe	Ме	C1	CMezOPr-i	Ms	H
	Йe	Мe	C1	CH ₂ CH ₂ OMe	2K	Ħ
	Me	Ме	Cl	CH ₂ CH ₂ OE t	Ms	H
40	Ме ·	Мe	C1	CH ₂ CH ₂ OPr-i	Жs	H
	Ме	Ме	CI	CHE tOH	ns	H
	Йe	Мe	C1	CHE tOMe	Иs	H
	Ме	Ме	C1	CHE tOMe	CI	H
45	Иe	Ме	C1	CHE tOMe	MeS	H
	Ме	Me	CI	CHE tOMe	MeSO	H
	ite	Ме	Cl	CHE tOE t	Ms .	H . 17
	Ие ———	Me Me	C1	CHE tOPT-i	zľ.	. H

5	A	B	Х	Y	Z	Ę.		
	Мe	Ме	CI	CH ₂ OCH ₂ CH ₂ OMe	V -	~		
	Мe	Ме	CI	CH ₂ OCH ₂ CH ₂ OMe	ăs Ci	H H H H H H H H H H H H		
	Йe	Йe	CI	CH ₂ OCH ₂ CH ₂ OMe	C1	Ħ		
	Me	Иe	CI	CH OCH CH ON-	MeS	<u>H</u>		
10	Иe	Ме	CI	CH ₂ OCH ₂ CH ₂ OMe	MeSO	H		
	Me ·	Ме		CH ₂ OCH ₂ CH ₂ OE t	Ms	H		
	Me	ne Me	CI	CHMeOCH _z CH _z OMe	Ms	H		
	Me	ne Me	CI	CH 20-Y8	Ms	H		
	Me		Cl	CH = 0 - Y9	Ms	H		
15	ne Me	Мe	CI	CH20-Y10	Ms	H		
		Ме	CI	CHMeO-Y8	Ms	H		
	Me	Ме	CI	CHMeO-Y9	Ms	H		
	Иe	Иe	CI -	CHMeO-Y10	Ms	H		
	Ме	Me	CI	CH2O-Y13	Ms	H		
20	Мe	Me	Cl	CHMeO-Y13	Ms	H.		
	Мe	Me	CI	CHzililez	Ms	H		
	Мe	Йe	CI	CHz-Y14	Ms	Ħ		
	Мe	Me	CI	CHMeNMe _z	Ms T	H		
	Мe	Йe	Cl	CH ₂ CH ₂ NMe ₂	Ms	Ħ		
25	Me	Мe	C1	CH 2OCH 2Ph	ar.	Н Н Н		
	Me	Мe	CI	CHMeOCH _z Ph	Ms	ü		
	Мe	Мe	C1	CH 20CH 2CO 2Me	Ms	n n		
	Мe	Иe	. C1	CHzOCHzCOzEt	zK	H		
30	Me .	. Me	Cl	CH 20CHMeCO 2Me	en em	H		
-	Me	Me	CI	CH ₂ CN	Ms	H		
	Me	Me	C1	CHMeCN	žis Žis	H		
	Мe	Me	CI	CH _z SMe	Ms	H H		
	Мe	Мe	CI	CH ₂ SMe	CI	П П		
35	Me	Мe	ČĨ	CH ₂ SMe	MeS	H H		
	Мe	Мe	ČĪ	CH ₂ SMe	MeSO	n n		
	He	Me	ĊĨ	CH _z SE t	neso Ms	H H H		
	Мe	Йe	Cl	CH ₂ SE t	CI	п		
	Me	Иe	CI	CH ₂ SEt		П 11		
40	Me	Me	CI	CH ₂ SEt	MeS	H		
	Мe	Me	CI	CH ₂ SOMe	ЖeS0	H		
	Ме	Ме			Ns	H		
	Иe .	ne Me	C1 C1	CH ₂ SOEt	Дs	H		
	Ме	iie iie	Cl	CH 2SO2Me	Ms Ci	H		
45	Иe	Me	C1	CH zSOzNe	CI	H ,		
	Me	ne Me	C1	CH ₂ SO ₂ Me	MeS	H		
	Me	ne Me	CI CI	CH ₂ SO ₂ Me	MeSO	H		
	116	ne -	Cl	CH ₂ SO ₂ Et	ZK	H		

	A	В	Х	. Y	Z	Q.
5	Me	Иe	CI	CH ₂ SO ₂ Et	C1	H
	Иe	Иe	CI	CH ₂ SO ₂ Et	йeS	H
	Me	Ме	Ci	CH ₂ SO ₂ Et	MeSO	Н Н Н Н Н
	Иe	Иe	CI	CHMeSMe	Ms	ä 11
10	Мe	Me	ČÌ	CHMeSEt	Ms	II
	Иe	Йe	Ci	CHMeSO _z Me	Ms	11
	Иe	Иe	Cl	CHMeSO _z Et	Ms	n II
	lie	Иe	CI	CH _z SCH _z CH _z OMe	Ms	u u
	Ме	Ме	CI	CH ₂ OCOMe	ns Ms	n u
15	Me	Ме	CI	CH ₂ OCOEt	Ms	n u
	Иe	Me	CI	CHMeOCOMe	ns Ms	n n
	Me	Me	CI	CH ₂ OSO ₂ He	ns Ms	II T
	Me	ne Me	C1	CH ₂ OSO ₂ Et	ns Ms	<u>п</u>
•	Me	ne Me	C1	CHMeOSO _z Me	ns Ms	п
20	Et	ne Me		Ca on Cutien205tie		П.
	Et	ne Me	C1	CH ₂ OH	Ms.	П U
	Et		CI CI	CH ₂ OMe	Ms CI	<u>n</u>
		Me	C1	CH ₂ OMe	CI Hans	n
25	Et E÷	Me	C1	CH _z OMe	MeS.	нннннннн
	Et:	Ме	CI	CH ₂ OMe	MeSO *	n
	Et Et	Мe	C1	CH ₂ OMe	is Si	QI
		Me	CI	CH ≥0Me	C1	Q1
	Et	Ме .	C1	CH ₂ OMe	MeS	QI
30	Et	Ме	C1	CH ₂ OMe	MeS0	Q2
	Et	Иe	C1	CH ₂ OMe	MeS	Q2
	Et	Me	Cl	CH₂0Me	ŊeSO	92 93
	Et	Ме	Cl	CH _z OMe	Ms	fi3
	Et	Ме	C1	CH ₂ OMe	MeS	Q3
35	Et E:	Ме	C1	CH ₂ OMe	MeSO	9 3
	Et Et	Мe	Cl	CH ₂ OEt	Ms	H H H
	E:	Ме	C1	CH ₂ OEt	C1	H
	Et	Йe	C1	CH 20E t	MeS	H
40	Et	Ме	C1	CH 20Et	MeSO	H
70	Et	Ме	C1	CH ≥0E t	Ms	Ql
	Et	Ме	C1	CH ≥0E t	MeS	QI
	Et	Дe	Cl	CH ₂ OE t	MeS0	Q1
	Et	Ме	C1	CH ₂ OEt	Ms	Q2
45	Et	Ме	C1	. CH 2OE t	MeS	92
	Et	Иe	C1	CH ₂ OEt	MeS0	92
	Et	Мe	C1	CH = 0E t	Ms	93
	Et	Йe	CI	CH _z OEt	MeS	Q3

						
5	<u> </u>	E	X	Y	Z	ę.
	Et	Мe	C1	CH ₂ OE t	MeS0	Q3
	Et	Me	CI	CH ₂ OPT-i	Ms	
	Εt	Ие	C1	CH ₂ OP _T -i	C1	n n
	Et	Йe	C1	CH ₂ OPr-i	MeS	H H
10	Et	Мe	C1	CH ₂ OPr-i	MeS0	H H H Q1
	Εt	Ме	Cl	CH ₂ OP _T -i	Ms	רם
	Et	Ме	C1	CH ₂ OPr-i	ds.	Q 2
	Et	Ме	C1	CH2OPr-i	Ms	Q3
15	Et Et	Мe	Cl	CH ₂ OPr-n	Ms	ਸ਼
	Et	Йe	CI	$CH_zOCH = CH_z$	Ms	Ħ
	Et Et	Мe	CI	$CH_zOCH_zCH = CH_z$	Ms.	ਸੌ
	Et	Иe	Cl	$CH_2OCH_2C. \equiv CH$	Ms	Ä
	Et	Мe	CI	CH2OCH2CH2C1	Ms.	Ĥ
20	Et	Мe	CI	CH=0-Y5	Ms	Ħ
	Et	Мe	C1	CHMeOH	Мs	Ĥ
	Et	Me	CI	CHMeOMe	Ms	Ĥ
	Et	Me	C1	CHMeOMe	Cl -	H H H H H H H H H H H H H H H H H H H
25	Et	Me	C1	CHMeOMe	MeS	H
20	·Et	Ме	C1	CHMeOMe	MeSO	H
	Et	Ме	C1	CHMeOMe	zľ	Q 1
1	Et	Иe	C1	CHMe0Me	2K	02
	Et	Me -	CI	CHMeOMe	zM	93
30	Et Et	Ме	Cl	CHMeOE t	zk	. Н
	Et	Me Ma	CI	CHMeOE t	C1	Ħ ·
	Et	Ме	CI	CHMeOEt	MeS	03 H H H
	Et	Ме Ме	C1	CHMeOEt	MeSO	H
35	Et.	ne Me	CI CI	CHMeOEt	Ms	ff T
55	F÷	Me	CI	CHMeOEt CHMeOEt	Ms	Q2
	Et Et	Ме	CI	CHMeOPr-i	Ms V	93 H H H H
	Et	Ме	CI	CHMeOPr-i	Ms CI	H TT
	Et	Йe	CI	CHMeOPr-i	Cl MeS	n u
40	Et	Ме	CI	CHMeOPr-i	nes MeSO	п
	Εŧ	Ме	Cl	CHMeOPr-n	Ms Ms	n u
	Et	Ме	Ci	$CHMeOCH = CH_z$	ns Ms	H H H H
	Et	Ме	Cl	$CHMeOCH = CH_2$	ns Ms	п и.
45	Et	Ме	CI	CHMeOCH ₂ CH = CH ₂	ns Ms	T.
45	Et	Йe	CI	CHMeOCH ₂ C = CH	Ms	H
	Et	Ме	CI	CHMeOCH _z CH _z CI	Ms	H
	Et	Ме	CI	CHMeO-Y5	Ms	H
					1.10	14

	A	В	Х	Y	Z	<u>୍</u>
5	Et	Me	CI	CMe _z OH	Ms	17
	Et	Ме	CI	CMe ₂ OMe		H
	Et	Йe	Cl	CMe ₂ 0Et	Ms M-	нннннннннн
	Et	Ме	CI	CMezOF:-i	Жs	Ħ.
10	Et	Иe	CI	C1 C1 ON-	ğs	H
	Et	Иe		CH ₂ CH ₂ OMe	ils .	Ħ
	Et		C1	CH ₂ CH ₂ OEt	Ms	H
	Et	Иe	C1	CH ₂ CH ₂ OP _T -i	Ms	H
		Me Y-	C1	CHE tOH	Ms	H
15	Et	Ме	Cl	CHE tOMe	· Ms	H
	Et	Йe	C1	CHE tOMe	CI	Ħ
	Et	Ме	CI	CHE tOMe	ИeS	H
	Et	Иe	Cl	CHE tOMe	MeSO	H
	Et	Me	C1	CHEtOEt	Ms	H
20	Εt	' lie	CI	CHE tOPr-i	Ms	H
	Et	Мe	Cl	CH ₂ OCH ₂ CH ₂ OMe	Ms	ਸੌ
	Et	Иe	CI	CH2OCH2CH2OMe	C1	Ħ.
	Et	Me	C1	CH ₂ OCH ₂ CH ₂ OMe	MeS	H H
	Et	Мe	CI	CH2OCH2CH2OMe	MeSO	H H H H H H H H H H
25	Et	lie	CI	CHzOCHzCHzOEt	Ms .	n n
	Et	Me	C1	CHMeOCH ₂ CH ₂ OMe	zK	n n
	Et	Мe	CĪ	CH 20- Y8	Ms	<u>и</u> .
	Et	Me	. Čī	CH ≥0 - Y9	is Sk	n u
	Et	Ме	či	CH ₂ O-Y10	is As	H H H
30	Et	Ме	ČĪ	CHMe0-Y8		<u>п</u>
	Et	Йe	CI	CHMe0-Y9	Ms Ms	П .
	Et	Ме	CI	CHMe0-Y10	Ms M_	H
	Et	Ме	CI		yz ·	H
	Et	Ме	CI	CH ₂ O-Y13	Ms	Ħ
35	Et	Me		CHMe0-Y13	Ms.	H
	Et	ne Me	CI CI	CHz:NHez	ls	H H H H H
	Et		Cl ·	CH ₂ -Y14) is	H
	Et	Me N-	CI	CHMeNMe _z	Ms	H
40	E L	Me	C1	CH ₂ CH ₂ NMe ₂	Ms	H
~0	Et	де	C1	CH ₂ OCH ₂ Ph	ak s	H
	Et	Me	C1	CHMeOCH zPh	lis	H
	Et Et	Ме	C1	CH2OCH2CO2Me	Иs	H
	EE	Иe	CI	CH=OCH=CO=Et	zř	H H H
45	Et Et Et	Me .	Cl	CH 20CHMeCO 2Me	Ms	H
	Et	Me	CI	CH 2CN	Ms	H
	Et	Иe	Cl	CHMeCN	Ms	H H
	Et	Me	Cl	CH z SMe	Ms	H

5	<u>A</u>	В	X	Y	Z	Q
	Εt	Мe	Cl	CH _z SMe	CI	U
	Et	Мe	CI	CH _z SMe	MeS	n u
	Et	Мe	CI	CH 2 SHe	MeSO	H II
	Et	Мe	CI	CHzSEt	Ms	H
10	Et	Мe	C1	CH ₂ SE t	CI	H
	Et	Жe	Cl	CH ₂ SEt	MeS	H
	Et	Ие	Cl	CH ₂ SE t	MeS0	ä
	Et	Me	CI	CH _z SOMe	Ms	Ħ
15	Et Et	Иe	Cl	CH ₂ SOE t	Ms	Ħ
	Et	Мe	C1	CH ₂ SO ₂ Me	Ms	Ħ.
	Et	Йe	Cl	CH ₂ SO ₂ Me	CI	Ħ
	Et	Мe	CI	CH 2SO 2Me	MeS	Ħ
	Et	Me	CI	CH ₂ SO ₂ Me	MeSO	Ħ·
20	Et	Me	CI	CH _z SO _z E t	Ms	Ĥ
	Et	Me	C1	CH _z SO _z Et	Cl	H
	Et	Мe	CI	CH _z SO _z Et	MeS	H
	Et	Мe	CI	CH _z SO _z Et	MeSO ·	
25	Et	Me	C1	CHMeSMe	Ms	H
	Et	Me	CI	CHMeSE t	Ms	H
	Et	Me	CI	CHMeSO zMe	Ms	H
	Et	Ме	CI	CHMeSO _z Et	Ms	H
	Et	∦e ⁻	CI	CH _z SCH _z CH _z OMe	Ms	H
30	Et	Йe	Cl	CH ₂ OCOMe	Ms	H
	Et	Мe	Cl	CH ₂ OCOE t	Ms	Ħ
	Et Et	Мe	CI	CHMeOCOMe	Ms	H
	Et	Ме	CI	CHz0S0zMe	Ms	H
35	Et	-Me Me	CI	CH ₂ OSO ₂ Et	Ms	<u>H</u> .
	Er-i	ne Me	Cl Cl	CHMeOSO _z Me	Ms	<u>H</u> .
	Pr-i	Me	C1	CH OH .	Ms	H H H H H
	Pr-i	Ме	C1	CH ₂ 0Me	Ms Ct	H T
	Pr-i	Иe	C1	CH ₂ OMe	CI	H
40	Pr-i	Ме	CI	CH₂0Me CH₂0Me	MeS	П 17
	Pr-i	Иe	CI	CH ₂ 0Me	MeSO Ms	П СТ
	P r -i	Ме	CI	CH ₂ OHe	CI	Q1
	Pr-i	Йe	CI	Cii 20Me	MeS	Q1 Q1
45	Pr-i	Ме	CI	CH ₂ OMe	MeSO	Q2
	Pr-i	: Me	CI	CH ₂ OMe	MeS	92
	Pr-i	Ме	CI	CH ₂ OMe	MeSO	Q 2
	Pr-i	Йe	Cl	CH _z OMe	Ms	Q 3
					1 144	

	A	E	Х	Y	Z	Q
5	Pr-i	Иe	C1 .	CH₂OMe	¥-0	00
	Pr-i	Ме	C1	CH ₂ OMe	ĭdeS M−SO	Q3
	Pr-i	Ме	CI	CH ₂ OEt	NeSO	9 3
	Pr-i	Ме	C1	CH ₂ OEt	Ms C1	H
10	Pr-i	Me	CI	CH ₂ OEt	C1 N-S	H H
	Pr-i	Ме	C1		MeS	H
	Pr-i	Me	C1	CH ₂ OE t	MeSO	H
	Pr-i	Me	CI	CH OF :	Ms	91
	Pr-i	йe		CH ₂ OEt	MeS	19
15	P=-i		CI CI	CH ₂ OEt	MeS0	Q1
	Pr-i	Ме	CI	CH ₂ OE t	Ŋs	92
	Pr-i	Me Ma	CI	CH ₂ OE t	MeS	92 92
		lle Me	· Cl ·	CH ₂ OEt	MeS0	42
	Pr-i	Me Me	C1	CH ₂ OE t	Ms	Q3
20	Pr-i	Йе М-	CI	CH ₂ OE t	MeS	93
	Pr-i	Мe	Cl	CH ₂ OEt .	MeS0	g3
	Pr-i	Мe	C1	CHzOPr-i	Ms	H
	Pr-i	Йe	C1	CH₂OPr-i	C1	H H H
25	Pr-i	Йe	C1	CH ₂ OPr-i	MeS	Ħ
20	Pr-i	Me	CI	CHzOPr-i	MeS0	H
	Pr-i	Иe	C1	CH ₂ OPr-i	Ms	Q1
	Pr-i	Me	CI	CH2OPr-i	Ms	92
	Pr-i	Иe	. C1	CH ₂ OPr-i	Ms	g 3
30	Pr-i	Дe	C1	CH ₂ OPr-n	Ms	H
•	Pr-i	Иe	CI	CH ₂ OCH = CH ₂	Ms	H
	Pr-i	Ме	Cl	CH ₂ OCH ₂ CH=CH ₂	Ms	Ħ
•	Pr-i	Ме	CI	CH ₂ OCH ₂ C ≡ CH	2Ms	H
	Pr-i	Мe	C1	CH2OCH2CH2C1	Ms	H
35	Pr-i	Ме	CI	CH ₂ 0-Y5	Ms	H
	Pr-i	Me	C1	CHMeOH	Мs	H
	Pr-i	Иe	CI	СНМеОМе	Ms	H
	Pr-i	Ме	C1	CHMe0Me	C1	H H H H H
40	Pr-i	Me	Cl	СНМеОМе	MeS	H
70	Pr-i	Me	C1	СНМеОМе	MeS0	
	Pr-i	Ме	Cl	CHMeOMe	Ms	QI
	Pr-i	Ме	C1	CHMeOMe	. Ms	92 93
	Pr-i	Иe	Cl	CHMeOMe	lls	g 3
45	P=-i	Ме	C1	CHMeOE t	Ms	H
	Pr-i	Me	CI	CHMeOEt	C1	Ħ
	Pr-i	Me	C1	CHMeOE t	MeS	H
	Pr-i	Мe	CI	CHMeOE t	MeS0	H

0 282 944

			. 8			
	A	B	X	Y	Z	Ç.
5	Pr-i	Мe	Cl	CHMeOEt	Ms	Q 1
	Pr-i	Мe	CI	CHMeOE t	Ms	Q 2
	Pr-i	Me	ČI	CHMeOE:	Ms	Q 3
	Pr-i	Мe	C1	CHMeOPr-i	Ms	n go
10	Pr-i	Мe	CI	CHMeOPr-i	Cl	H H H H H
	Pr-i	Йe	CI	CHMeOPr-i	MeS	<u>н</u>
	Pr-i	Me	C1	CHMeOPr-i	MeS0	H
	Pr-i	Иe	CI	CHMeOPr-n	Ms	Ħ.
	Pr-i	Мe	C1	CHMeOCH = CH ₂	Ms	Ħ.
15	Pr-i	Me	Cī	CHMeOCH = CH _z	Ms	H.
	Pr-i	Ме	CI	CHMeOCH ₂ CH = CH ₂	Ms	H.
	Pr-i	Ме	Cl	CHMeOCH = CH	Ms	H.
-	Pr-i	Мe	CI .	CHMeOCH _z CH _z Cl	ZMS	. н
20	Pr-i -	Me	CI	CHMeO-Y5	Ms	H H H H
	Pr-i	Me	CI	CMe ₂ OH	Ms	Ħ
	Pr-i	Ме	CI	CMe ₂ 0Me	Ms	Ħ
	Pr-i	Me	CI	CMe _z OEt	Ms	Ĥ
	Pr-i	Иe	CI	CMezOPr-i	Ms	Ħ
25	Pr-i	Мe	C1	CH ₂ CH ₂ OMe	Ms	Ħ
	Pr-i	Иe	CI	CH ₂ CH ₂ OE t	Ms	Ħ
	Pr-i	Мe	CI	CH ₂ CH ₂ OPr-i	Ms	Ħ
	Pr-i	Мe .	. C1	CHEtOH	Ms	Ħ
30	Pr-i	Ие	C1	CHE tOMe	. Ms	Ĥ
30	Pr-i	Йe	CI	CHE tOMe	C1	H
	Pr-i	Иe	CI	CHE tOMe	MeS	Ħ
	Pr-i	Ме	C1	CHE tOMe	MeSO	Ħ
	Pr-i	Йe	CI	CHE tOE t	Ms	H H H
3 5	P r -i	Ме	CI	CHE tOPi	Ms	H
	Pr-i	Ме	Cl	CH _z OCH _z CH _z OMe	Ms	H
	Pr-i	Иe	CI	CH ₂ OCH ₂ CH ₂ OMe	Cl	H H
	Pr-i	Me	C1	CHzOCHzCHzOMe	MeS	H
	Pr-i	Мe	CI	CHzOCHzCHzOMe	MeS0	H
40	Pr-i	Мe	C1	CH2OCH2CH2OEt	Ms	H
	Pr-i	Ме	CI	CHMeOCH aCH a OMe	Ms	H
	Pi	Ме	CI	CH ₂ 0-Y8	Ms	H
	Pr-i	Йe	CI	CH ₂ 0-Y9	Ms	H.
45	Pr-i	Мe	CI	CH=0-Y10	Ms ·	H -
-	Pr-i	Me	C1	CHMe0-Y8	Ms	H
	Pr-i	Иe	C1	CHMeO-Y9	Ms	H
	Pr-i	Йe	CI	CHMeO-Y10	Ms	H

5	A	В	Х	Y	Z .	Q
3	Pr-i	Мe	CI	CH=0-Y13	Иs	H
	Pr-i	Иe	CI	CHMeO-Y13	Ms	нннннннннн
	Pr-i Pr-i	Ме Ме	C1 Cl	CHzNMez CHz-Y14	Ms Ms	H H
10	P r -i	Мe	ČĪ	CHMeNMe ₂	Ms	H
	Pr-i	Мe	C1	CH ₂ CH ₂ NMe ₂	ris	Ħ
	Pr-i	Me Ma	CI	CH ₂ OCH ₂ Ph	Ms ·	H
	Pr-i Pr-i	Ме Ме	C1 C1	CHMeOCH₂Ph CH₂OCH₂CO₂Me	Ms Ms	H H
15	Pr-i	Иe	Cl	CH ₂ OCH ₂ CO ₂ Et	Ms	H
	Pr-i	Ме	Cl	CH ₂ OCHMeCO ₂ Me	Мs	Ĥ
	Pr-i	Иe	CI .	CHzCN	Ms	Ħ
20	Pr-i Pr-i	Ме Ме	C1 C1	CHMeCN	äs Ns	Ħ
	Pr-i	Me	C1	CH ₂ SMe CH ₂ SMe	C1	H
	Pr-i	lle	Cl	CH ₂ SMe	MeS	H
	.Pr-i	Me	Cl	CH _z SMe	MeS0	H H H
25	Pr-i Pr-i	Ме Ме	CI	CH ₂ SEt	Ms	H H
	Pr-i	ne Me	C1 C1	CH _z SEt CH _z SEt	Cl MeS	n H
	Pr-i	Мe	ČI	CH ₂ SE t	MeSO	H H H
	Pr-i	Мe	- C1	CH _z SOMe	Ms	H
30	Pr-i Pr-i	Me Me	CI CI	CH _z SOEt	Ms M-	H H
	Pr-i	ne Me	CI	CHzSOzMe CHzSOzMe	Ms Cl	H H
	Pr-i	Мe	CI	CH ₂ SO ₂ Me	MeS .	Ħ
	Pr-i	Ме	Cl	CH _z SO _z Me	MeSO	H
35	Pr-i Pr-i	Ме	Ci	CH ₂ SO ₂ Et	Жs	H
	Pr-i	Me Me	C1 C1	CH ₂ SO ₂ Et CH ₂ SO ₂ Et	Cl MeS	H H H H H H H H H H H H H H H H H H H
	Pr-i	Ме	ČÌ	CH ₂ SO ₂ Et	MeSO	Ħ
40	Pr-i	Me	CI	CHMeSMe	Ms	H
	Pr-i Pr-i	Me Me	C1	CHMeSE:	ž V	H. U
	Pr-i	ne Ne	CI Cl	CHMeSOzMe CHMeSOzEt	eK eK	H
	Pr-i	Жe	CI	CH _z SCH _z CH _z OMe	Ms	Ħ
45	Pr-i	lie	Cl	CH ₂ OCOMe	Ms	H
	Pr-i	Me M-	C1	CH _z OCOEt	Ms V-	H
	P r -i Pr-i	Me Me	CI CI	CHMeOCOMe CHzOSOzMe	Ms Ms	H H
	Pr-i	Me	C1	CH ₂ OSO ₂ Et	ns Ns	H
50	Pr-i	Ие	CI	CHMeOSO zMe	Ms	H

			·			
5	<u>A</u>	<u> </u>	X	Y	Z	Q
	Мe	Мe	МeO	CH zOH	Мs	п
	Me	Мe	. MeO	CH 20Me	is As	<u>п</u>
	Мe	Мe	MeO	CH = OMe	CI	II.
10	Йe	Иe	MeO	CH z OMe	MeS	Н Н Н Н
	Ме	Ме	MeO	CH 20Me	MeSO	H H
	Мe	Мe	MeO	CH ≥OMe	Ms	äı
	Йe	Ме	MeO	CH₂0Me	CI	QÎ
	Me	Ме	CeM	CH₂0Me	MeS	QI
15	Me	Йe	MeO	CH ₂ 0Me	MeSO	92
	Me	Ме	MeO	CH ₂ 0Me	MeS	02
	Me	Йe	MeO	CH _z 0Me	MeSO	92
	Me	Ме	MeO	CH ₂ 0Me	Ms	03
20	Me	Йe	MeO	CH ₂ 0Me	MeS	Q3
20	Me Me	Иe	MeO	CH ₂ 0Me	HeSO	G3
	ne Me	Ме	MeO	CH20Et	Ms	H
	ne Me	Me Me	MeO.	CH ₂ OEt	C1	" Н
	Ме	Me Me	MeO	CH _z OEt	MeS	H
25	Иe	ne Me	MeO	CH ₂ OEt	MeSO	H
•	Me	ne Me	MeO MeO	CH ₂ 0Et	Ms	Q1
	Me	Ме	MeO	CH ₂ OEt	MeS	Q1
	Ме	Ме	MeO	CH ₂ 0Et CH ₂ 0Et	деSO	Q1
30	Me	Me '	MeO	CH ₂ OE i	Ms M-S	Q2
	Me	Иe	MeO	CH ₂ OE t	MeS MeSO	Q2
	Me	Мe	MeO	CH ₂ OE t	neso Ms	92 93
	Me	Мe	MeO	CH ₂ OE t	MeS	€3 €2
	Мe	Иe	MeO	CHzOEt	MeSO	Q 3
35	Me	Иe	MeO	CHzOPr-i.	Ms	
	Ме	Мe	MeO	CHzOPr-i	CI	H H H
	Яe	116	MeO	CH ₂ OP _T -i	MeS	Ĥ
	Ме	Ме	MeO	CH ₂ OPr-i	MeS0	Ĥ.
40	Me	Me	MeO	CH=OPr-i	Ms	Q1
	Me	Me	MeO	CH≥OPr-i	Ms	Q2
	Me Ma	Ме	MeO	CH ₂ OPr-i	Ms	Q3
	Me Me	Ме	МеО	CH ₂ OPr-n	Ms	
45	ne Me	Me Me	ЯеО	CH ₂ OCH = CH ₂	ži,	H H H H
45	ne Me	Me	MeO	$CH_zOCH_zCH = CH_z$	Ms .	H.
	ne Me	Me Me	MeO MeO	CH=OCH=C ≡ CH	Ms	H
	Me	ne Me	MeO	CH ₂ OCH ₂ CH ₂ C1	Ms	H
		116	MeO	CH = 0-Y5	Ms	H

	A	В	X	Ÿ -	Z	Ç.
5	Нe	Me	MeO	CAHeOH	Ms	Н
	Йe	Иe	Me0	CHMe0Me	Ms	Ħ
	Мe	Me	МеО	СЯмеоме	CI	H H H H
	Йe	Ме	ИеО	CHMe0Me	MeS	Ħ
10	Нe	Ме	ЙeЭ	СНМеОМе	MeSO	<u> </u>
	Me	lie	NeO	CHMe0Me	Ms	ü1
	iie iie	Иe	Me0	CHMeOMe	zn zm	Q 2
	Иe	Me	CeK	Cimeone	zn zK	43
	Иe	Ме	Meg	CHMeOEt	ns As	11 47)
15	Ме	Иe	ХеО	CHMe0Et	C1	n n
	Me	Ме	CeK	CHMeOEt	MeS	n n
	Иe	Иe	MeO	CHMeOEt	MeSO	H H H
	Ме	Me	MeO	CHMeOE:	neso Ms	Q 1
	Me	ne Ne	MeO	CHMeOEt	ns Ms	92
20	ne Me	Me	MeO	CHMeOEt	ns Ms	47
	Иe	ne Ne	MeO	CHMeOPT-i	ns Ms	Q3
	ne Ne	ne Me	NeO		ris CI	n u
	ne Me	ne Me		CHMeOPr-i		n n
25	ne Me	ne Me	MeO	CHMeOPr-i	MeS	H H H H H
_	ne Me	ne Me	yeo yeo	CHMeOPr-i	MeSO	n T
	ne Me	ne Ne		CHMeOPr-a	Ms Ma	т П
	Me	ne Me	MeO MeO	$CHMeOCH = CH_2$ $CHMeOCH = CH_2$	Ms .	а Н
	ne Me	ne Ne	. yeo		Ms M-	n H
30	ne Me	ne Me		CHMeOCH ₂ CH = CH ₂	Ms Ma	п Н
	ne Me		MeO	CHMeOCH ₂ C=CH	Ms .	H
	ne Ne	Иe	Me0	CHMeOCH ₂ CH ₂ Cl	Ms V-	<u>п</u>
		Me M-	Me0	CHMe0-Y5	Ms	H H
	Ме	. Me	MeO	CMezOH	Ms	n H
35	Ме	` Me	MeO	CMezOMe	Ms M-	Π 67
	Me 8-	Иe	Me0	CMezOEt	Ms V-	H
	fle Ma	ile .	MeO	CMezOPr-i	Ms M-	H
	Me Me	Иe	MeO	CH ₂ CH ₂ OMe	Ms V-	H
40		Me M-	MeO	CH ₂ CH ₂ OEt	Ms H-	H
	Me	ije H	Me0	CH ₂ CH ₂ OP ₇ -i	· Ms	n H
	Me	Me M-	MeO	CHE tOH	Ms M-	
	Иe Ма	Йe	Me0	CHE tOMe	Ms Ci	H
	Иe	Йe	MeO M-0	CHE toMe	Cl M-S	H
45	iie	Иe	MeO	CHE tOMe	MeS N-SO	H
	Мe	Иe	yeg .	CHE toMe	MeSO	H
	ile	lle V-	MeO	CHE tOE t	Ms V-	H
	Me	Иe	MeO	CHE tOPr-i	Ms	Ħ

	A	В	X	Y	Z	્
5	- Me	М-	V . 0			
	Me	Ме Ме	MeO	CH2OCH2CH2OMe	Ms	. Н
	Me .	ne Me	MeO	CH ₂ OCH ₂ CH ₂ OMe	Cl	H
	Иe	Ме	MeO MeO	CH ₂ OCH ₂ CH ₂ OMe	MeS	H
10	Мe	Ме	MeO	CH ₂ OCH ₂ CH ₂ OMe	MeSO	Ħ
	Me	Me	MeO	CHzOCHzCHzOEt CHMeOCHzCHzOMe	Ms	H
	Мe	Me	MeO	CH ₂ O-Y8	iis M-	H H H H H H H H H H H H H H H H H H H
	Me	Мe	MeO	CH _z O-Y9	Ms Ms	Ħ
15	Мe	Иe	MeO	CH20-Y10	Ms Ms	<u> </u>
	Me	Me	MeO	CHMeO-Y8	Ms	Д. 17
	Me	Ме	MeO	CHMeO-Y9	Ms	H
	Me	Ме	MeO	CHMeO-Y10	Ms	Ĥ
00	Me Me	Me Me	MeO	CH20-Y13	Ms	H
20	Me	Me Me	MeO	CHMeO-Y13	Ms	H H
	Ме	ne Me	MeO	CH2HMez	Ms	H
	Ме	Me	MeO MeO	CH2-Y14	Ms	H -
	Me	Ме	MeO	CHMeNMe; CH2CH2NMe;	Ms	<u>H</u> -
25	Me	Иe	MeO	CH _z OCH _z Ph	Ms	H
	Мe	Ме	MeO	CHMeOCH _z Ph	eM SK	H
	Мe	Иe	Me0	CH ₂ OCH ₂ CO ₂ Me	ns Ms	H H
	Me	Ме .	MeO	CH2OCH2CO2Et	Ms	H
30	Ме	Мe	MeO	CH2OCHMeCOzMe	Ms	H.
	Ме	Ме	MeO .	CH ₂ CN	Ms	Ħ
	Me	Ме	MeO	CHMeCN	Ms	Ĥ
	Me Me	Me M-	MeO	CH ≥SMe	Ms	H H H H
35	Me	Me Me	MeO	CH ₂ SMe	CI	H :
33	Me	ne Me	MeO	CH ₂ SMe	MeS	Н -
	Me	Me	MeO MeO	CH SHe	MeS0	H H H
	Me	Йe	MeO	CH ₂ SE t CH ₂ SE t	Ms .	H
	Me	Ме	[*] MeO	CH ₂ SE t	· C1	H
40	Me	Йe	MeO	CH _z SE t	MeS MeSO	H H
	Мe	Ме	MeO	CH ₂ SOMe	Ms ·	H
	Me	Ме	Me0	CH ₂ SOE t	Ms	H .
	Me	Me	MeO	CH ₂ SO ₂ Me	zk ZK	H H
45	Me	Ме	MeO	CH ₂ SO ₂ Me	Cl	H .
	Me	Ме	MeO	CH ₂ SO ₂ Me	MeS	H H
	Me Me	ile Ye	MeO	CH2SOzMe	MeS0	-H
	116	Me	Me0 ^	CH ₂ SO ₂ Et	Ms	H

. 55

	A	В	X	Y	Z	Ę.
5	Me	Йe	MeO	CH ₂ SO ₂ Et	CI	H
	Мe	Иe	ИeO	CH ₂ SO ₂ Et	MeS	υ Ω
	Мe	Ме	МеО	CH ₂ SO ₂ Et	MeSO	нининининининин
	Me	Ие	MeO	CHMeSMe	Ms	H II
10	Me	Йe	CeK	CHMeSE t	Ms	n n
	Мe	Ме	ИeO	CHMeSOzMe	ns Ns	H
	Me	Me	MeO	CAMeSO _z £t	Ms	Ħ
	Me	Me	MeO	OH2SCH2CH2OMe	Ms	Ħ
	Me	Me	MeO	CH ₂ OCOMe	zĸ	Ħ
15	Me	Иe	ЙеО	CH=OCOE ±	Ms	Ħ
	Мe	Me	CeM	CHMeOCOMe	Ms	H
	Мe	lle	MeO	CH ₂ OSO ₂ Me	Ms	Ĥ
	Me	Иe	MeO	CH2OSO2Et	Ms	Ħ
20	Мe	Иe	MeO	CHMeOSO _z Me	Ms	Ĥ
	Et	Йe	MeO	CH ₂ OH	Ms	Н -
	Et	Иe	MeO	CH _z OMe	Ms	H
	Et	Иe	MeO	CH _z OMe	C1	H
	Et	Ме	MeO	CH _z OMe	MeS	H
25	Et.	Me	ИeO	CH ₂ OMe	MeSO	
	Et	Мe	MeO	CH ₂ 0Me	zk	Q1
•	Et	Мe	MeO	CH ₂ OMe	. Cl	Q 1
	Et	Мe	CeK	CH ₂ OMe	MeS	Q1
30	Et	Ме	· Me0	CH ₂ OMe	MeS0	Q2
	Et	Me	MeO	CH _z 0Me	MeS	92
	Et	Ме	йеЭ	CH ₂ OMe	MeSO	Q2
	Et	Ме	ДеЭ	CH ₂ OMe	Ms	Q3
	Et	Ме	ЙeЭ	CH ₂ OMe	MeS	Q3
35	Et Et	Ме	Me0	CH ₂ OMe	MeS0	93
	E t	Ме Ме	Me0	CH ₂ OEt	Ms C1	H H H H
	Et	ne Me	CeM	CH ₂ OEt	C1	<u>п</u>
	Et	ne Me	MeO MeO	CH ₂ OEt	MeS MeSO	п
40	Et	Ме	neo MeO	CH ₂ OEt CH ₂ OEt	Ms Nesu	Q 1
	Et	ne Me	MeO	CH ₂ OE t	ns MeS	@I
	Εċ	Me	MeO	CH ₂ OEt	HeSO	QI
	Et	Ме	Meo	CH ₂ OE t	neso Ms	02
	Et	Ме	Me9	CH ₂ OE t	MeS	. 92
45	Et	Иe	MeO	CH _z OEt	MeSO	02
	Et	Иe	MeO	CH ₂ OE t	. 2K	92 93
	Et	Иe	MeO	CH ₂ OEt	MeS	Q 3

	Å	В	X	Y		
5			<u> </u>	I	Z	Q
-	Et	Йe	ИeO	CH ₂ OE t	MeSO	በየ
	Et	. Me	MeO	CH ₂ OP _T -i	Ms	Ħ
	Εŧ	Йe	MeO	CH ₂ OPr-i	CI	Ħ
10	Et	Ме	MeO	CHzOPr-i	MeS	93 H H H H
10	Et	Мe	MeO	CHzOPr-i	MeSO	H
	Et	Ме	MeO	CHzOPr-i	Ms	Q1
	Et	Ме	MeO	CH ₂ OPr-i	Ms	Q2
	Et	Ме	MeO	CHzOPr-i	. Ms	£3
15	Et	Ме	MeO	CH ₂ OP _I -n	Мs	H
	£t F÷	Ме	MeO	$CH_2OCH = CH_2$	Ms	H ·
	Et	Me	MeO	$CH_2OCH_2CH = CH_2$	Ms	Н.,
	Et	Ме	MeO	CH _z OCH _z C ≡CH	Ms	H
00	Et	Ме	Me0	CH ₂ OCH ₂ CH ₂ Cl	Ms	H
20	Et Et	Ме	MeO M-0	CH ₂ O-Y5	Ms	H H H H H H
	Et	Ме	MeO	CHMeOH	Ms	<u>H</u>
	Et.	Ме Ме	MeO MeO	CHMeOMe	Ms	H
•	Et	ne Me	MeO	CHMeOMe	C1	<u>H</u>
25	Et	ne Me	MeO MeO	CHMeOMe CHMeOMe	MeS	H
	Eŧ	Иe	MeO	Chheone CHMe0Me	MeS0	H
	Et	Ме	MeO	Cimeone Cimeone	Ms Ma	Q I
	Et	Ме	MeO	CHMeOMe	Ms Ma	Q2
20	Et	Йe	MeO	CHMeOEt	Ms Ms	Q3
30	Et	Ме	MeO :	CHMeOEt	CI	H
	Et	Me	MeO	CHMeOE t	MeS	Н Н Н
	Et	Йe	MeO	CHMeOEt	MeSO	H II
	Εt	Ме.	MeO	CHMeOE:	· Ms	Q 1:
35	ΕĖ	Ме	MeO	CHMeOEt	Ms	92
	Et Et	Мe	MeO	CHMeOE t	Ms	03
	Et	, Ме	MeO	CHMeOPr-i	Ms	H
	Εt	Мe	MeO	CHMeOPr-i	CI	H
40	Et	Мe	MeO	CHMeOPr-i	MeS	H H H
40	Et	Мe	MeO	CHMeOPr-i	MeS0	H
	Et	Me	MeO	CHMeOPr-n	Ms	H
	Et	- Me	MeO	CHMeOCH = CH ₂	Ms	H
	Et	Ме	MeO	$CHMeOCH = CH_z$	Ms	H H
45	Et	Me	MeO	CHMeOCH ₂ CH = CH ₂	Ms	H.
	Et"	Ме	Me0	$CHMeOCH_{z}C = CH$	Ms	H .
	Et Et	Me	ЖeO	CHMeOCH CH2C1	Ms	H.
	<u>C</u> t	Me	MeO	CHMeO-Y5	Ms	H

	A	Б	Х	Y	\overline{z}	Q.
5	Et	Йe	MeO	CMezOH	Ма	П
	Et	Иe	MeO	CMe ₂ 0Me	Ms L	Ħ
	Et	Иe	Ceff	CMez0Et	Ms V-	
	Et	Ме	MeO	CMezOPr-i	Ms.	н
10	Et	Иe	MeO	CH ₂ CH ₂ OMe	Ms H-	n
	Et	Ме	neo Celi	CH ₂ CH ₂ ORE t	Ms M-	H.
	Et	ne Ne	neo Neo	CH CH OB- :	Ms	Ħ
	Et	ile ile	MeO	CH ₂ CH ₂ OPr-i	Иs	li T
	Et	ne Ne		CHE tOH	Иs	Ħ
15	Et	ne Me	MeO MeO	CHE toMe	Ms	н
	Et		MeO MeO	CHE tOMe	C1	H
	Et	Ме	MeO	CHE to Me	MeS	H
	Et	Me Me	MeO	CHE tOMe	MeSO	H
	Et	ile Ma	MeO	CHE tOE t	Ms	H
20	Et	Me	Me0	CHEtOPr-i	Ms	Ħ
	E: E:	Me Ma	MeO	CH ₂ OCH ₂ CH ₂ OMe	Ms	Ħ
	Et	Иe	MeO	CH ₂ OCH ₂ CH ₂ OMe	C1	H
	E	Иe	ЖeO	CH ₂ OCH ₂ CH ₂ OMe	MeS	Ħ
25	Et	Ме	ЖеО	CH ₂ OCH ₂ CH ₂ OMe	MeSO	Ħ
	Εt	Ме	ДеО	CH ₂ OCH ₂ CH ₂ OEt	Ms	H
	Et	Me	MeO	CHMeOCH 2CH 2OMe	Ms	Ħ
	Et	Me	ЖеО	CH 20 - Y8	Ms	Ħ
	Et	Ме	. MeO	CH20-Y9	Ms	Ħ
30	Et Et	Ме	MeO	CH ₂ 0-Y10	Ms	Ħ
	55 54	Иe	ЖеО	CHMe0-Y8	Ms	H
	Et	Me	ЙeО	CHMe0-Y9	Ms	Ħ
	Et	Ме	MeO	CHMe0-Y10	Ms	<u>H</u>
	Et	Мe	MeO	CH2O-Y13	Ms	H
35	Et	Йe	CeK	CHMe0-Y13	Ms	<u>H</u>
	Et Et	Мe	ИeO	CH = NMe =	Ms	H
	E.L	Ме	МеО	CHz-Y14	Ms	H
	Et	Ме	MeO	CHMeNMe ₂	Ms	H
40	Et E=	Иe	MeO	CH = CH = NMe =	Ms	H
	Et Et	Йe	MeO	CH ₂ OCH ₂ Ph	Мs	H
		Ме	MeO	CHMeOCH₂Ph	Ms	H
	E 5	Ме	ХeO	CH ₂ OCH ₂ CO ₂ Me	Жs	H
	EEEE	Ме	MeO	CH2OCH2COzEt	Ms '	H
45	₽.E C+	Жe	MeO	CH 2OCHMeCO 2Me	zK.	H
		Ме	MeO	CH ₂ CN	Ms	· H
	Et	Me	MeO	CHMeCN	Ms	Ħ
	Et	Me	MeO	CH ≥SMe	Ms	H

	A	В	X	Y		
5		 		I	Z	Q
	Et	Иe	MeO.	CH _z SMe	C1	н
	Et	Иe	CeK	CH_zSMe	MeS	H
	Et	Мe	MeO	CH ₂ SMe	HeSO	H
10	Et Et	Иe	MeO	CH _z SE t	Ms	ਸ਼ੇ
10	EC	Ме	MeO	CH₂SEt	C1	Ħ
	Et	Ме	CeM	CH _z SEt	MeS	Ħ
	Et	Ме	MeO	CH ₂ SE t	MeSO	Ħ
	Eż	Ме	MeO	CH ₂ SOMe	· Ms	Ĥ
15	Et	Ме	ИеО	CH _z SOE t	Ms	н
	Et	Ме	MeO	CH_zSO_zMe	Ms	Ĥ
	Et	Мe	CeM	CH _z SO _z He	CI	Ä
	Et	Me	MeO	CH ₂ SO ₂ He	MeS	Ħ
	Et	Ме	MeO	CH ₂ SO ₂ Me	MeSO	Ĥ.
20	Et	Ме	MeO	CH _z SO _z Et	Ms	Ħ
	Et	Ме	MeO	CH ₂ SO ₂ Et	C1	Ħ
	Et	Мe	MeO	CH ₂ SO ₂ Et	MeS	Ħ
	Et	Ме	MeO	CH ₂ SO ₂ Et	 MeSO	H -
25	Et	Мe	MeO	CHMeSMe	Ms	нннининнинниннинниннинн
	Et	Ме	MeO	CHMeSEt	Ms	H
	Et E÷	Ме	MeO	CHMeSO zMe	Ms .	H
	E 7 E 2	Ме	MeO	CHMeSO _z Et	Ms ·	H
	Et Et Et	Me -	MeO	CH2SCH2CH2OMe	Ms	H
30	Et	Me Me	MeO	CH 20COMe	Ms	H
	Et	Me Y-	МеЭ	CH ₂ OCOEt	Ms.	H
	Et	Ме	MeO	CHMeOCOMe	Ms	H
	Et	Me · Me	MeO	CH ₂ OSO ₂ He	Ms	H
35	Et.	. We	MeO	CH20S02Et	Мs	H
33	Pr-i	Ме	MeO	CHMeOSO _z Me	ăs.	H H
	Pr-i	Me Me	MeO MeO	CH ₂ OH	Ms	H H
	Pr-i		MeO	CH ₂ 0Me	Мs	H
	Pr-i	Йе Ме	MeO ·	CH ₂ OMe	CI	H
40	Pr-i	ne Me	MeO	CH _z OMe	MeS	H
	Pr-i	ne Me	MeO	CH ₂ OMe	MeS0	H
	Pr-i	ne Me	MeO	CH ₂ OMe	Ms	۵ſ
	Pr-i	ne Me	Me0	CH 20Me	CI ·	ΘĪ
	Pr-i	Me	MeO	CH₂OMe	MeS	Q1
45	Pr-i	ne Me	MeO	CH _z OMe	MeSO	Q2
	Pr-i	ne Me	MeO MeO	CH 20Me	MeS	92
	Pr-i	Me	MeO	CH zOMe	MeSO	<u>92</u>
			1160	CH = OMe	Ms	Q3

5	A.	B .	X	Y	Z	Q
	Pr-i	Мe	ИeO	C∄ ₂ OMe	MeS	93
	P⊤-i	Мe	MeO	CH _z OMe	MeSO	23
	Pr-i	Me	MeO	CH ₂ OE £	zK	
	Pr-i	Йe	MeO	CH _z OEt	CI	П П
10	Pr-i	Me	Ceff	CH ₂ OEt	MeS	T T
	Pr-i	Мe	MeO	CH ₂ OEt	MeSO	Д U
	Pr-i	Me	MeO	CH ₂ OE t	Ms	H H H
	Pr-i	Me	ЖeО	CH ₂ OE t	ns NeS	61 61
15	Pr-i	Жe	MeO	CH ₂ OE t	MeSO	Q1
73	Pr-i	Мe	MeO	CH _z OE t	Ms	Q1
	Pr-i	Мe	MeO	CH ₂ OE t	MeS	92 92
	Pr-i	Иe	CeK	CH _z OE t	MeSO	42 42
	Pr-i	Йe	ИeO	CH ₂ OE t	Ms ·	Q2
20	Pr-i	Иe	MeO	CH ₂ OE t	lleS	93
	Pr-i	Мe	MeO	CH ₂ OEt	nes YeSO	43
	Pr-i	Мe	ИeO	CH ₂ OPr-i		g 3
	P r -i	Йe	MeO	CH ₂ OP _T -i	Ms Cl	а 17
	Pr-i	Иe	MeO	CH ₂ OP _T -i	MeS	H H H
25	Pr-i	Мe	ЙeО	CH _z OP _r -i	MeSO	H
	Pr-i	Мe	MeO	CH _z OPr-i	ineso Ms	1 1
	Pr-i	Ме	МeO	CH ₂ OP _T -i	en eK	92
	Pr-i	Me -	CeM	CH _z OP _r -i	Ms	Q 3
30	Pr-i	Иe	MeO	CH ₂ OPr-n	Ms	n eo
	Pr-i	Мe	MeO	$CH_zOCH = CH_z$	Ms	H H
	Pr-i	Мe	CeK	CH ₂ OCH ₂ CH=CH ₂	en en	H H H H H H H H H H H H H H H H H H H
	Pr-i	Иe	CeM	CH ₂ OCH ₂ C ≡ CH	Ms	H
	Pr-i	Иe	MeO	CH zOCH zCH zCl	ZK ZK	н
35	Pr-i	Мe	MeO	CH = 0 - Y5	ZK ZK	Ä
	Pr-i	Мe	MeO	CHMeOH	 Ms	Ħ
	Pr-i	Мe	MeO	CHMeOMe	Ms	Ħ
	Pr-i	Мe	· MeO	CHMeOMe	Cī	Ĥ
40	Pr-i	Мe	MeO	CHMeOMe	MeS	Ħ
40	Pr-i	Мe	MeO	СНМеОМе	MeSO	Ħ
	Pr-i	Мe	MeO	СНМеОМе	Ms	91
	Pr-i	Мe	MeO	СНМеОМе	zK	Q2
	Pi	Мe	MeO	СНМеОМе	Ms	Q3
45	Pr-i	Me	ИeO	CHMeOEt	Ms	H
	Pr-i	Иe	МeO	CHMeOEt	CI	Ħ
	Pr-i	Me	Me0	CHMeOEt	MeS	H
	Pr-i	Иe	Me0	CHMeOEt	MeSO	H

0 282 944

				· · · · · · · · · · · · · · · · · · ·		
5	<u> </u>	В	X	<u>Y</u>	Z	G.
J	Pr-i	Мe	йеО	CHMeOE t	Ms	01
	Pr-i	Me	MeO	CHMeOE t	Ms	Q1
	Pr-i	Мe	MeO	CHMeOE t	Ms	Q2
	Pr-i	Me	MeO	CHMeOPr-i	ns Ms	93
10	Pr∸i	Me	MeO	CHMeOPr-i	ns C1	Н Н Н Н Н
	Pr-i	Me	MeO	CHMeOPr-i	MeS	n
	Pr-i	Мe	МеĴ	CHMeOPr-i	MeSO	П.
	Pr-i	Мe	MeO	CHMeOPr-n		n II
	Pr-i	Иe	MeO	$CHMeOCH = CH_2$	Ms Ma	n .
15	Pr-i	Ме	MeO	$CHMeOCH = CH_2$	Ms M-	<u>n</u> .
	Pr-i	Мe	MeO	CHMeOCH ₂ CH = CH ₂	Ms	H H
	Pr-i	Me	MeO	CHMeOCH ₂ C = CH	iis V	Н
	Pr-i	Me	NeO	Chineoch 2C = Ca Chineoch 2CH 2CI	Ms	H H H
20	Pr-i	Me	HeO	CHMe9-Y5	. Ms	n i
20	Pr-i	Иe	Me0		Ms	Ħ
	Pr-i	Ме	MeO	CMezOH CMezOMe	Ms ·	H
	P . - i	Иe	MeO	CMe _z OEt	Ms	<u>H</u>
	Pr-i	Мe	йеО	CMezOPr-i	Ms	H
25	Pr-i	Ме	MeO	CH ₂ CH ₂ OMe	Ms V-	H ·
	Pr-i	Иe	ИеО	CH ₂ CH ₂ OEt	Ms u_	H
	Pr-i	Йe	MeO	CH ₂ CH ₂ OPr-i	Ms	H
	Pr-i	Йe	ИеО	CHE tOH	Ms H-	H
	Pr-i	Me	MeO	CHE tOMe	Ms M-	H
30	Pr-i	Me	MeO	CHE tOMe	Ms Cl	п
	Pr-i	Me	MeO	CHE tone	MeS	H H H
	Pr-i	Йe	ИеО	CHE toMe		n
	Pr-i	Me	ИеО	CHE tolle	MeSO Ms	11
35	Pr-i	Ме	ИеО	CHE tOPr-i	ns Ms	H -
-	Pr-i	Me	Me0	CH2OCH2CH2OMe	ns Ms	H.
	Pr-i	Ме	MeO	CH ₂ OCH ₂ CH ₂ OMe	CI	H
	Pr-i	Me ·	ile0	CH ₂ OCH ₂ CH ₂ OMe	MeS	п.
	Pr-i	Иe	MeO	CH ₂ OCH ₂ CH ₂ OMe	nes MeSO	H
40	Pr-i	Мe	МеО	CH ₂ OCH ₂ CH ₂ OEt	Ms Ms	H H
	Pr-i	Мe	MeO	CHMeOCH ₂ CH ₂ OMe	ns Ms	- Д
	Pr-i	Me	йеО	CH ₂ 0-Y8	Ms .	H
	Pr-i	Ме	MeO	CH ₂ 0-Y9	Ms	H H :
	Pr-i	Ме	yeg .	CH ₂ O-Y1O	Ms	n : u
45	Pr-i	Me	He0	CHMe0-Y8	Ms	H H H
	Pr-i	Me	MeO .	CHMeO-Y9	ns Ms	<u>п</u>
	Pr-i	Мe	MeO	CHMeO-Y1O	Ms	H
			1100	owien-110	113	" П

50

55 _.

	A	В	X	Y	Z	Ç.
5	Pr-i	Ме	MeO	CH20-Y13	Ms .	H
	Pr-i	Ме	MeĐ	CHMe0-Y13	ns Ns	п
	Pr-i	Жe	MeO	CH ₂ NMe ₂	ns Ns	H
	Pr-i	Ме	CeM	CH ₂ -Y14		H H
10	P r -i	Йe	MeO	CHMeNMe ₂	Ms V	п
	P - -i	Ме	MeO	CH ₂ CH ₂ NMe ₂) N	H
	Pr-i	ne Me			Ŋs	H
	Pr-i		MeO	H ₂ CH ₂ HC	is	H
		Иe.	ЖеО	CHMeOCH ₂ Ph	lis	H H H H
15	Pr-i	lle	MeO	CH2OCH2CO2Me	Ms	H
	Pr-i	Ме	MeO	CH2OCH2CO2Et	Ms	Ħ
	Pr-i	Мe	MeO	CH 20CHMeCO 2Me	Ms	H
	Pr-i	Ме	MeO	CH ≥ CN	Ms	H
	Pr-i	Ме	MeO	CHMeCN	Ms	Ħ
20	Pr-i	Иe	MeO	CH₂SMe	Ms	H
	Pr-i	Мe	MeO	CH₂SMe	Cl	H
	P r −i	Йe	MeO	CH₂SMe	MeS	H
	Pr-i	Мe	MeO	CH₂SMe	MeSO	. Ħ
	Pr-i	Иe	Me0	CH ₂ SE t	ils	Ħ
25	P - -i	Мe	MeO	CH _z SE t	C1	Ħ
	Pr-i	Ме	CeK	CH ₂ SEt	MeS	H H H H H H H
	Pr-i	Мe	СеК	CH ₂ SE t	MeSO	<u> </u>
	Pr-i	Me	МеО	CH ₂ SOMe	Ms	n n
.0	Pr-i	Йe	. MeO	CH ₂ SOE t	Ms	n n
30	Pr-i	Иe	MeO	CH _z SO _z Me	Ms	n tr
	P r -i	Ме	MeO	CH ₂ SO ₂ He	C1	n tr
	Pr-i	Ме	MeO	CH ₂ SO ₂ Me	MeS	n er
	Pr-i	Ме	MeO	CH ₂ SO ₂ He		n **
35	Pr-i	Me	MeO		MeSO	H
33	Pr-i	Ме		CH ₂ SO ₂ Et	Ms	Ħ
	P r -i	ne Me	Me0	CH ₂ SO ₂ Et	C1	H
	TI-1		∦e0	CH ₂ SO ₂ Et	MeS	H H
	Pr-i	Me Y-	Me0	CH _z SO _z Et	MeSO	H
40	Pi	Ме	MeO	CHMeSMe	Ms	H
-	Pr-i	Мe	ЖеО	CHMeSE:	Ms	H
	Pr-i	Ме	MeO	CHMeSOzMe	Ms	H
	Pr-i	Ме	MeO	CHMeSO = Et	Ms	H H
	Pr-i	Нe	MeO	CH ₂ SCH ₂ CH ₂ OMe	Мs	H
45	Pr-i	Me	MeO	CH 20COMe	Ms .	H H
	Pr-i	Ме	MeO	CH=OCOEt	Ms	H
	Pr-i'	Ме -	Me0	CHMe0C0Me	Ms	H H
	Pr-i	Me .	MeO	CH ₂ OSO ₂ Me	Ms	H
	Pr-i	Me ·	MeO	CH2OSO2Et	Ms	H
50	Pr-i	Мe	MeO	CHMeOSO zMe	Ms	H

0 282 944

	<u>A</u>	B	X	Y	Z	Q
5	Мe	Ħ	Br	CH ₂ OH	W_	
	Me	Ħ	Br	CH ₂ OMe	Ms	H
	Мe	H	Br	CH ₂ OMe	Ms	H
	Me	Ħ	Br	CH z OMe	Cl	H
10	Йe	H	Br	Ca ON-	MeS	H
	Мe	Ħ	Br	CH ₂ OMe	MeS0	H
	Иe	ä	Br	CH ₂ OEt	Ms	H
	Me	H H H H H H	Br	CH ₂ 0Et	CI	Ħ
	Мe	ü ü	Br	CH _z OEt	MeS	H
15	Ме	n n		CH=0Et	MeSO	H
	Ме	n n	Br	CH ₂ OP _T -i	Ms	H
	Ме	H	Br	CHzOPr-n	Ms	H
	Ме	H	Br	CH ₂ OCH = CH ₂	Ms	H
	Me	H	Br	$CH_2OCH_2CH = CH_2$	Ms	H
20	Me	n H	Br	$CH_2OCH_2C \equiv CH$	Ms	H
	Me	п	Br	CH2OCH2CH2C1	Ms	H
	Me	<u>п</u> 17	Br	CHMeOH	Ms	H
	ne Me	II IT	Br -	CHMeOMe	Ms · ·	нинининининин
25	ne Me	H H H H H	Br	CHMeOMe	C1	H
25	Me	u U	Br	CHMe0Me	MeS	H
	Me	П II	Br	CHMeOMe	MeSO	H
	Me	n n	Br	CHMeOEt	Ms	H
	Me	п Н	Br	CHMeOCH = CHz	Ms	H
30	Me	Н	Br	CHMeOCH = CH 2	Ms	H
	Me	Ω IF	Br	CHMeOCH ₂ CH = CH ₂	Ms	H
	Me	H	Br	CHMeOCH ₂ C≡CH	Ms	H
	Me	H	Br	CHMeOCH 2CH 2CI	Ms	H
	Me	H H	Br	CMe ₂ OH	Ms .	H
35	Me	n H	Br	CMe _z OMe	Ms	H
	ne Ne	п Н	Br	CMe _z OEt	Ms	H
	ne Me	n u	Br	CH 2CH 2OMe	ati.	H
•	ne Me	H	Br	CH ₂ CH ₂ OEt	Ms	ннннннннннннн
40	Me	H	Br	CHEtOH	Ms	H
40		H	Br	CHE tOMe	Ms	H
	Me Ma	H	Br	CHEtOEt	Ms	
	Me .	H H	Br	CH = OCH = CH = OMe	2M	H
	Me u_	H	Br	CHMeOCH = CH = OMe	Ms	H H H H
45	Me Ma	H	Br	CHzNMez	Ms	H
	Me Me	H	Br	CHMeNMe _z	Ms	H
	Me 🏸 .	. H	₿r	CH 2CH 2NMe 2	Ms	H
	Me.	H	Br	CH 20 CH 2Ph	Ms	H

	A	В	X	Y	Z	
5					<i>L</i>	
	Мe	H	Br	CHMeOCH₂Ph	Ms	T T
	Мe	H H H H	Br	CHzOCHzCOzMe	- Ms	нннннннннннн
	Мe	H	Br	CH ₂ OCH ₂ CO ₂ Et	Ms.	H
	Мe	H	Br	CH zOCHMeCO zMe	Ms	n n
10	Мe	H	8r	CH ₂ CN	Ns	H H
	Мe	H	B r	CH _z SMe	iis Iis	#
	Иe	H	Br	CH₂SEŧ	zK	H.
	Мe	H	Br	CH _z SOMe	Ms ·	H
15	Мe	H	Br	CH ₂ SO ₂ He	Ms	H
•	Me	H	Br	CH ₂ SO ₂ Et	Ms	Ħ
	Мe	H	Br	CHMeSMe	· Ms	ਸ਼
•	Me	H	Br	CHMeSO _z Me	zK	ਸ਼ੇ
	Me	H	Br	.CH2SCH2CH2OMe	Ms	Ħ
20	Ме	H	Br	CH ₂ OCOMe	Ms	Ħ
	Ме	H	Br	CHMe0C0Me	Ms	Ħ
	Me	Ħ	Br	CH ₂ OSO ₂ Me	Ms	Ħ
	Me	Ħ	Br	CHMe0S0 ₂ Me	Ms	
25	Et	H	Br	CH=OH	Ms	H
25	Et	. <u>Н</u>	Br	CH _z OHe	Ms	Ĥ
	Et	H	Br	CH _z OMe	CI	Ĥ
	Et	H	Br	CH ₂ OMe	MeS	Ï
	Et	H	Br	CH ₂ OMe	MeSO	Ħ
30	Et	H	Br	CH ₂ OE t	Ms	H H H
	Et	H .	Br	CH ₂ OE t	C1	Ĥ
	Et	H	Br	CH ₂ OE t	MeS	Ħ.
	Et	H	Br	CH ₂ OEt	MeSO	Ħ
	Et	H	Br	CH ₂ OPr-i	ils	Ħ
35	Et	H	Br	CHzOPr-n	Ms	H
	Et	H	Br	$CH_2OCH = CH_2$	Ms	H
	Et Et	H	Br	CH ₂ OCH ₂ CH=CH ₂	Ms	H
	Et	H	Br _.	CH ₂ OCH ₂ C ≡CH	Ms	H
40	Et	H	Br -	CH2OCH2CH2CI	Ms.	H
	Et	H	Br	СНМеОН	Ms	H
	E t	H	Br	CHMeOMe	Ms	H
	Et	H	Br	СНМеЭМе	\sim C1	H
	Et	H	Br	CHMe0Me	MeS	H
45	Et	H	Br	CHMe0Me	MeSO	H H
	Et ,	H	B r	CHMeOEt	Ms	H
•	Et.	H H	Br	CHMeOCH = CH ₂	Ms	H
	<u>.</u>	<u> </u>	Br	CHMeOCH = CH ₂	Ms	H

0 282 944

	A	В	X	Y	-	
5				L	Z	
	Et	H	Br	CHMeOCH = CH2	Мs	ш
	Et	H H H	Br	$CHMeOCH_{z}C \equiv CH$	Ms .	n T
	Εt	H	Br	CHMeOCH2CH2CI	Ms	n II
	Et Et	H	Br	CMe _z OH	Ms	H H
10	FE	H	Br	CMe-OMe	zK	H
	Et	Ħ	Br	CMezOEt	Ms	H
	Et	H	Br	CH _z CH _z OMe	Ms.	H
	Et	H	Br	CH ₂ CH ₂ OE t	Ms	· #
15	Et	. H	Br	CHE tOH	Ms	Ħ
	Et	H	Br	CHE tOMe	Ms	ਸ਼ੇ
	Et	H	Br	CHE ÈOE È	Ms	Ĥ
	Et	H	Br	CHzOCHzCHzOMe	Ms	Ħ
	Et	H	Br	CHMeOCH zCH zOMe	Мs	H H H H H H H H H H H H H H H H H H H
20	Et Et	n.	Br	CH ₂ NMe ₂	Ms	H H
	Et Et	П 77	Br	CHMeNMe =	Ms	H
	Et	П	Br	CH z CH z WMez	Ms	H
	Et	п	Br	CH20CH2Ph	Ms	H H
25	Et	H H H H H H	Br	CHMeOCH ₂ Ph	Ms	Н Н Н Н Н
	Et	H H	B r · Br	CH2OCH2CO2He	Ms	H
	Et	H	Br	CH ₂ OCH ₂ CO ₂ Et	Ms	H
	Et	Ħ	Br	CH 20CHMeCO 2Me CH 2CN	Ms	<u> Ή</u>
	Et	Ħ	Br	CH ₂ SMe	Ms	H
30	Et	Ħ	Br	CH ₂ SEt	Ms Ms	H
	Et	H	Br	CH ₂ SOMe	Ms Ma	H
	Et	H	Br	CH ₂ SO ₂ Me	aM Ms	H H
	Et	H	Br	CH ₂ SO ₂ E t	ns Ms	n T
35	Et	H H H H	Br	CHMeSMe	iis Ms	H H H H H
	() () () () () () () () () () () () () (H .	Br	CHMeSO _z Me	Ms	п
	Et	H	Br	CHzSCHzCHzOMe	75 75	H
	Et	H	Br	CH20COMe	Ms.	H
10	Et	H	Br	CHMe0COMe	ЙS	Ĥ
40	Et Et	H	Br	CH ₂ OSO ₂ Me	Ms	H H
	EI.	H	Br	CHMeOSO _z Me	Ms	Ħ
	Pr-i	H	Br	CH ₂ OH	Ms	H
	Pr-i	H	Br	CH ≥0Me	Ms	H
45	Pr-i	H	Br	CH₂0Me	CI	H
	Pr-i	H	Br	CH₂0Me	MeS	H
	Pr-i. Pr-i	H H	Br	CH=0Me	MeSO	H . H H H H
	1171	п	Br	CH _z OEt	Ms	H

_	A	В	Х	Y	Z	Ç.
5	Pr-i	H	Br	CH ₂ OEt	C1	
	Pr-i	Ħ.	Br	CH ₂ OE t	C1	Ħ
	Pr-i	H	Br		MeS	Ħ
	Pr-i	H		CH ₂ OE t	MeSO	H
0	Pr-i	H	B r	CHzOPr-i	Ms .	ннининнининин
	Pr-i		Br	CH ₂ OPr-a	Жs	H
		Н	Br	$CH_{z}OCH = CH_{z}$	Ms	H
	Pr-i	H	Br	$CH_zOCH_zCH = CH_z$	Иs	H
	Pr-i	H	Br	CH ₂ OCH ₂ C ≡ CH	Ms	H
5	Pr-i	H	Br	CH2OCH2CH2C1	Ms	Ħ
	Pr-i	H	Br	CHMeOH	Ms	H
	Pr-i	H	Br	CHMeOMe	Ms	ਸ
	Pr-i	H	·Br	CHMeOMe	CI	Ħ
	Pr-i	H	Br	CHMeOMe	MeS	Ħ
0	Pr-i	H	Br	CHMeOMe	MeSO	Ħ
	Pr-i	H	Br	CHMeOE:	Ms	ä
	Pr-i	H	Br	CHMeOCH = CH2	Ms	II.
	Pr-i	H	Br	CHMeOCH = CH ₂	Ms	H
	P r -i	Ħ	Br	$CHMeOCH_2CH = CH_2$	ns Ms	. Н
5	Pr-i	H	Br	CHMeOCH _z C≡CH	ns en	H
	Pr-i	H	Br	CHMeOCH _z CH _z CI	Ms	n n
	Pr-i	H	Br	CMe=OH		H
	Pr-i	Ä	Br	CMe ₂ OMe	is .	H
	Pr-i	Ħ	Br	CMe ₂ OEt	Ms V	H
)	Pr-i	Ħ	· Br	CH _z CH _z OMe	Ms	H
	Pr-i	Ħ	Br		iis	H
	Pr-i	Ħ	Br	CH 2CH 2OE t CHE tOH	Иs	H
	Pr-i	H	Br		ХIS	H.
	Pr-i	Ħ		CHE tOMe	Ms .	H
5	Pr-i	H	Br	CHE tOE t	lls	Ħ
	Pr-i	H	Br 2-	CH ₂ OCH ₂ CH ₂ OMe	Мs	H
	Pr-i	H	Br.	CHMeOCH 2CH 2OMe	Мs	H
	Pr-i		Br	CH ₂ NMe ₂	Иs	H
)		H	Br	CHMeNMez	Ms	H
	Pr-i	H	Br	CH z CH z NMe z	Ms	Н -
	Pr-i	H	Br	CH ₂ OCH ₂ Ph	zK	H
	Pr-i	H	Br	CHHeOCH ₂ Ph	Мs	H
	Pr-i	H	Br	CHzOCHzCOzMe	Ms	H
;	Pr-i	H	Br	CH ₂ OCH ₂ CO ₂ Et	Ms	H
	Pr-i	H	Br	CH zOCHMeCO zMe	Ms	H
	Pr-i	H	Br	CH 2CN	Ms	H
	Pr-i	H	Br	CH _z SMe	Ms	Ħ

0 282 944

À	В	Х	Y	Z	Ç,
Pr-i	H	Br	CH ₂ SEt	Ms	H
Pr-i	H	Br	CH ₂ SOMe	Ms	Ĥ
Pr-i	H	Br	CH _z SO _z Me	Ms	H
Pr-i	H	Br	CH _z SO _z Et	Ms	H
Pr-i	H	Br	CHMeSMe	Ms	H
Pr-i	H	Br	CHMeSO zMe	Ms	H
Pr-i	H	Br	CH2SCH2CH2OMe	Ms	H
P=-i	H	Br	CH₂0C0Me	Ms	H
Pr-i	. Н	Br	CHMeOCOMe .	Ms	H
Pr-i	H	Br	CH _z OSO _z Me	Ms	H
Pr-i	H	Br	CHMeOSO 2Me	Ms	H-

5		E	X	Y	Z	G.
	Мe	H H H H	I	CH ₂ OH	Мs	Н
	Иe	H	I	CH _z OMe	Ms	
	Me	H	I	CH ₂ 0Me	CI	ä
	Иe	Ħ	Ī	CH ₂ OMe	MeS	H H . H
10	Me	H	Ī	CH _z 0Me	MeSO	Ω Ω
	Me	ਜ ·	î	CH _z OE t	Ms	H H
	Ме	Ħ	Ť	CH ₂ OE t	C1	П 77
	Мe	H .	I I I I I I	CH ₂ OE t		H H
15	Me	Ħ	Ť	CH ₂ OE t	MeS .	H
15	Мe	H	I T	CT OD :	MeS0	H
	Me	H	1 T	CH ₂ OP _T -i	Ms	H
	ne Me	u u	i r	CH ₂ OPT-n·	Мs	H
		H	1	$CH_zOCH = CH_z$	ils.	H .
20	Ме	Ħ	Ī	$CH_2OCH_2CH = CH_2$	Ms	H
20	Me	Ħ	1	CH ₂ OCH ₂ C ≡ CH	Ms	H
_	Иe	H	I	CHzOCHzCHzC1	Ms .	H
	Мe	H	I I	CHMeOH	Иs	H
	Me	H	I	CHMe0Me	2K	H
25	Me	H.	I	CHMeOMe	C1	H
	Мe	H	I	CHMeOMe	MeS	H
	Иe	H	I	CHMeOMe	MeSO	Ħ
	Иe	H	Ī	CHMeOE t	Мs	Ĥ
	Me	H	Ĭ	CHMeOCH = CH ₂	Ms.	Ħ
30	Мe	H	ī	CHMeOCH = CH ₂	Ms	H H
	Мe	H	. Î	CHMeOCH ₂ CH = CH ₂	ns Ns	H
	Me	Ħ	Ť	CHMeOCH _z C≡CH	Ys	17
	Мe	Ĥ	Ť	CHMeOCH ₂ CH ₂ CI	Ms	H H
	Me	H	T T	CMe ₂ OH		<u>п</u> 17
35	Йe	H	Ť		Ms V-	n "
	Ме	H	Ţ	CMezOMe	Ms	H H H
	Me	n H	1 7	CMe ₂ OE t	Ms	H
	Me	<u>п</u>	Į,	CH ₂ CH ₂ OMe	Ms	H H
		H	Ţ	CH ₂ CH ₂ OEt	Ms	H
40	Me	H	Ĩ	CHE tOH	Ms	Ħ
	Me	H	Ī	CHE :OMe	Ms	H
	Me	H	Ī	CHE tOE t	Ms	H
	Иe	H	Ī	CH 20CH 2CH 20Me	Мs	H
	Me	H	Ī	CHMeOCH ₂ CH ₂ OMe	Ms	H H H H
45	Me	H	I	CH zWMez	Ms	H
	Me	H	I	CHMeNMe _z	Ms	H
	Me .	H	I	CH zCH zNMe z	zľi -	H
	Me i	H	Ī	CHzOCHzPh	Ms	Ħ

## ## ## ## ## ## ## ## ## ## ## ## ##							
Me H I CHA-OCH-2Ph Ms H Me H I CH2-OCH-2CO 2Ne Ms H Me H I CH2-OCH-2CO 2Ne Ms H Ms H Me H I CH2-OCH-2CO 2Ne Ms H Ms H Me H I CH2-OCH-2CO 2Ne Ms H Ms H Ms H I CH2-OCH-2CO 2Ne Ms H Ms H Ms H I CH2-SMe Ms H Ms H Me H I CH2-SMe Ms H Ms H Me H I CH2-SMe Ms H Ms H Me H I CH2-SOMe Ms H Ms H Me H I CH2-SOME Ms H Ms H Me H I CH2-SOME Ms H Ms H Me H I CH2-SO-2Pt Ms H Ms H Me H I CH2-SCH2-CH2-OMe Ms H Ms H I CH2-SCH2-CH2-OMe Ms H Ms H I CH2-SCH2-CH2-OMe Ms H Ms H I CH2-OCOMe Ms H Ms H Ms H I CH2-OCOMe Ms H Ms H I CH2-OMe Ms H I CH2-OMe Ms H I CH2-OMe Ms H I CH2-OMe Ms H I CH2-OMe Ms H I CH2-OMe Ms H I CH2-OMe Ms H I CH2-OME MS H I CH2-OME MS H I CH2-OME MS H I CH2-OME MS H I CH2-OME MS H I CH2-OME MS H I CH2-OME MS H I CH2-OME MS H I CH2-OME MS H I CH2-OME MS H I CH2-OME MS H I CH2-OME MS H I CH2-OME MS H I CH2-OME MS H I CH2-OME MS H I CH2-OME MS H I CH2-	_	<u> </u>	B	X	Y	Z	Q
Me H I CH2SMe Ms H Me H I CH2SGt Ms H Me H I CH2SOME MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZME MS H Me H I CH2SOZME MS H Me H I CH2SOZME MS H Me H I CH2SOZME MS H Me H I CH2OCOME MS H Me H I CH2OCOME MS H Me H I CH2OCOME MS H Me H I CH2OSOZME MS H Me H I CH2OSOZME MS H Me H I CH2OSOZME MS H Me H I CH2OME MES H Me H I CH2OME MES H Me H I CH2OME MES H Me H I CH2OME MES H ME H I CH2OME MES H ME H I CH2OEt ME H ME H I CH2OEt ME H ME H I CH2OEt ME H ME H I CH2OEt ME H ME H I CH2OET ME H ME H I CH2OET ME H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME S	5	Мe	H	I	CHM=OCH 2Ph	Me	U
Me H I CH2SMe Ms H Me H I CH2SGt Ms H Me H I CH2SOME MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZME MS H Me H I CH2SOZME MS H Me H I CH2SOZME MS H Me H I CH2SOZME MS H Me H I CH2OCOME MS H Me H I CH2OCOME MS H Me H I CH2OCOME MS H Me H I CH2OSOZME MS H Me H I CH2OSOZME MS H Me H I CH2OSOZME MS H Me H I CH2OME MES H Me H I CH2OME MES H Me H I CH2OME MES H Me H I CH2OME MES H ME H I CH2OME MES H ME H I CH2OEt ME H ME H I CH2OEt ME H ME H I CH2OEt ME H ME H I CH2OEt ME H ME H I CH2OET ME H ME H I CH2OET ME H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME S		Ме	H	Ī	CH = OCH = CO = Me		
Me H I CH2SMe Ms H Me H I CH2SGt Ms H Me H I CH2SOME MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZME MS H Me H I CH2SOZME MS H Me H I CH2SOZME MS H Me H I CH2SOZME MS H Me H I CH2OCOME MS H Me H I CH2OCOME MS H Me H I CH2OCOME MS H Me H I CH2OSOZME MS H Me H I CH2OSOZME MS H Me H I CH2OSOZME MS H Me H I CH2OME MES H Me H I CH2OME MES H Me H I CH2OME MES H Me H I CH2OME MES H ME H I CH2OME MES H ME H I CH2OEt ME H ME H I CH2OEt ME H ME H I CH2OEt ME H ME H I CH2OEt ME H ME H I CH2OET ME H ME H I CH2OET ME H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME S			H	I	CH ₂ OCH ₂ CO ₂ Et		H II
Me H I CH2SMe Ms H Me H I CH2SGt Ms H Me H I CH2SOME MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZHE MS H Me H I CH2SOZME MS H Me H I CH2SOZME MS H Me H I CH2SOZME MS H Me H I CH2SOZME MS H Me H I CH2OCOME MS H Me H I CH2OCOME MS H Me H I CH2OCOME MS H Me H I CH2OSOZME MS H Me H I CH2OSOZME MS H Me H I CH2OSOZME MS H Me H I CH2OME MES H Me H I CH2OME MES H Me H I CH2OME MES H Me H I CH2OME MES H ME H I CH2OME MES H ME H I CH2OEt ME H ME H I CH2OEt ME H ME H I CH2OEt ME H ME H I CH2OEt ME H ME H I CH2OET ME H ME H I CH2OET ME H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME H I CH2OET ME S H ME S			H	I	CH ₂ OCHMeCO ₂ Me		ਸ ਸ
Me H I CH2SMe Ms H Me H I CH2SOt Ms H Me H I CH2SOt Ms H Me H I CH2SOt Ms H Me H I CH2SOt Ms H Me H I CH2SOt Ms H Me H I CHM6SOt Ms H Me H I CHM6SOt Ms H Me H I CHM6SOt Ms H Me H I CH2SOt Me Ms H Me H I CH2SOt Me Ms H Me H I CH2SOt Me Ms H Me H I CH2SOt Me Ms H Me H I CH2SOt Me Ms H Me H I CH2SOt Me Ms H Me H I CH2SOt Me Ms H Me H I CH2SOt Me Ms H Me H I CH2SOt Me Ms H Me H I CH2SOt Me Ms H Me H I CH2SOt Me Ms H Me H I CH2OMe Ms H Et H I CH2OMe Ms H Et H I CH2OMe MeS H Et H I CH2OMe MeS H Me H I CH2OMe MeS H Et H I CH2OMe MeS H Et H I CH2OMe MeS H Et H I CH2OME MeS H Et H I CH2OEt Ms H MeSO H MeSO H	10		H	I	CH ₂ CN		H
Me			H	I			Ħ
Me			H	1			Ħ
Me			H	. I	CH _z SOMe		Ħ
Me	15			Ī	CH 2SO 2Me	Ms -	H
Me H I CHMeSOzMe Ms H Me H I CHzSCHzCHzOMe Ms H Me H I CHzOCOMe Ms H Me H I CHzOCOMe Ms H Me H I CHzOSOzMe Ms H Me H I CHzOSOzMe Ms H Me H I CHzOSOzMe Ms H Et H I CHzOMe MeS H Et H I CHzOMe MeS H Bt H I CHzOMe MeS H Et H I CHzOMe MeSO H Et H I CHzOEt Ms H MeSO H Et H I CHzOEt MeS H				Ī		Ms .	H
Me H I CH2SCH2CH2OME MS H Me H I CH2OCOME MS H Me H I CH2OSO2ME MS H Me H I CH2OSO2ME MS H Me H I CH2OSO2ME MS H Me H I CH2OME MS H Et H I CH2OME MS H Et H I CH2OME MS H Et H I CH2OME MS H Et H I CH2OME MS H Et H I CH2OME MES H Et H I CH2OME MES H BE H I CH2OME MS H CH2OME MS H			<u>H</u>	I			Н
Et H I CH20H Ms H Et H I CH20Me Ms H Et H I CH20Me CI H Et H I CH20Me MeS H Et H I CH20Me MeS H Et H I CH20Me MeSO H Et H I CH20Et Ms H Et H I CH20Et Ms H Et H I CH20Et MeSO H Et H I CH20Et MeSO H Et H I CH20Et MeSO H			h T	Ĩ	CHMeSOzMe		H
Et H I CH20H Ms H Et H I CH20Me Ms H Et H I CH20Me CI H Et H I CH20Me MeS H Et H I CH20Me MeS H Et H I CH20Me MeSO H Et H I CH20Et Ms H Et H I CH20Et Ms H Et H I CH20Et MeSO H Et H I CH20Et MeSO H Et H I CH20Et MeSO H			Н	į,	CH ₂ SCH ₂ CH ₂ OMe		H
Et H I CH20H Ms H Et H I CH20Me Ms H Et H I CH20Me CI H Et H I CH20Me MeS H Et H I CH20Me MeS H Et H I CH20Me MeSO H Et H I CH20Et Ms H Et H I CH20Et Ms H Et H I CH20Et MeSO H Et H I CH20Et MeSO H Et H I CH20Et MeSO H	20		n r	į,			H
Et H I CH20H Ms H Et H I CH20Me Ms H Et H I CH20Me CI H Et H I CH20Me MeS H Et H I CH20Me MeS H Et H I CH20Me MeSO H Et H I CH20Et Ms H Et H I CH20Et Ms H Et H I CH20Et MeSO H Et H I CH20Et MeSO H Et H I CH20Et MeSO H			II.	I T			H
Et H I CH20H Ms H Et H I CH20Me Ms H Et H I CH20Me CI H Et H I CH20Me MeS H Et H I CH20Me MeS H Et H I CH20Me MeSO H Et H I CH20Et Ms H Et H I CH20Et Ms H Et H I CH20Et MeSO H Et H I CH20Et MeSO H Et H I CH20Et MeSO H			n T	Ţ	CEM-050 M-		H
25 Et H I CH20Me Ms H Et H I CH20Me C1 H Et H I CH20Me MeS H Et H I CH20Me MeSO H Et H I CH20Et Ms H 30 Et H I CH20Et C1 H Et H I CH20Et MeSO H Et H I CH20Et MeSO H Et H I CH20Et MeSO H			H	Ţ	Calon Culien20 sue		Н
Et H I CH20Me CI H Et H I CH20Me MeS H Et H I CH20Me MeSO H Et H I CH20Et Ms H Et H I CH20Et CI H Et H I CH20Et MeSO H Et H I CH20Et MeSO H Et H I CH20Et MeSO H	25		ਸ਼ੌ	Ť	CH-OM-		n
Et H I CH20Me MeS H Et H I CH20Me MeSO H Et H I CH20Et Ms H Et H I CH20Et CI H Et H I CH20Et MeSO H Et H I CH20Et MeSO H Et H I CH20Et MeSO H			Ħ	Ť			II II
Et H I CH20Me MeSO H Et H I CH20Et Ms H Et H I CH20Et CI H Et H I CH20Et MeSO H Et H I CH20Et MeSO H			H	Ī	CH ₂ OMe		
Et H I CH20Et Ms H Et H I CH20Et CI H Et H I CH20Et MeS H Et H I CH20Et MeSO H			H	Ī	CH ₂ 0Me		H
Et H I CH20Et CI H Et H I CH20Et MeS H Et H I CH20Et MeSO H	20		Η .	I	CH ₂ OEt		Ħ
Et H I CH2OEt MeSO H	30		H .	I	CH ₂ OE t		H
ьс н I CH _Z OEt MeSO н			H	Ī			H
CH ₂ OP _T -i Ms H 35 Et H I CH ₂ OP _T -n Ms H		_		Ī	CH ₂ OE t		H
35 C5 II CH-OPT-n Me II			H	Ī	CHzOPr-i		
F- U CU COU CU	35		n	i r		Ms	Ħ :
Et H I CH ₂ OCH = CH ₂ Ms H Et H I CH ₂ OCH ₂ CH=CH ₂ Ms H		i ÷	n. U	1			H
			H H	Ţ	CH OCH C = CH		H'
	-		H	Ţ	CH-0CH-CH C1		H
Et H I CH2OCH2CH2C1 Ms H 40 Et H I CHMeOH Ms H	40		Ħ	Ī			u -
Et H I CHMeOMe Ms H				Ť			п
				Î		CI	
Fr H I CTM-OM- W-C III		Εt	H	Ī			Ħ
Et H I CHMeOMe MeSO H	45	Et	H	Ī			H
Et H I CHMeOEt Ms H	40	Et		I	CHMeOEt		H -
H I $CHMeOCH = CH_2$ Ms H		Et ,	H	I	CHMeOCH = CH _z	Ms	H
Et H I $CHMeOCH = CH_z$ Ms H		Et.	H	I	$CHMeOCH = CH_z$	Ms	H

<u>A</u>	Б	X	Y	Z	Ç.
Et	H	I	CHMeOCH ₂ CH = CH ₂	Ms	H
Et	Ħ	Ī	HO=Ost=CH CHMeOCHzC≡CH	Ms	H
Εt	H H H H H	ī	CHMeOCH ₂ CH ₂ Cl	iis ak	п Н
Et	Ħ	Ť	CMezOH	en 2M	ū
Ēt	Ħ	Ť	CMe _z OMe		H
Et	Ä	Ť.	CMe_OEt	Ms	Ħ
Et	й й	7		žK	H H H H H
Et	11 11	Į. T	CH ₂ CH ₂ OMe	Ms	Ħ
Et	Ħ	I T	CH ₂ CH ₂ OE t	Ms	H
Et	Д 17	į,	CHE ±OH	Мs	Н
Et	H	Ţ	CHE tOMe	Ms	H
	H	Ī	CHE toe't	Ms	H
Et	H	Ī	CH2OCH2CH2OMe	Ms .	H
Et	H	Ī	$CHMeOCH_zCH_zOMe$	Ms	H
Et	H	I	CH zilMez	Мs	H
Et	H	I	CHMeNMe _z	ZK	H
Et	H	I	CH ₂ CH ₂ NMe ₂	Ms	H H H H H H H H H
Et	H	I	CH ₂ OCH ₂ Ph	Ms	ਸ
Εt	H	I	CHMeOCH ₂ Ph	Ms	Ħ
Et	H	I	CH ₂ OCH ₂ CO ₂ He	Ms	Ĥ
Et	H	Ĩ	CH2OCH2CO2Et	Ms	H
Et	H	ī	CH 20CHMeCO 2Me	XIS	H
Et	H	Ī	CH 2CN	Ms	H
Et	H	Î	CH ₂ SMe	ns Ms	П
Et	Ħ	Ţ	CH ₂ SE t		H
Et	Ħ	Ĭ	CH ₂ SOMe	i Ms	H
Et	Ĥ	I		Ms	H
Et	H		CH₂SO₂Me	Ms	H
Et	п Н	Ţ	CH ₂ SO ₂ Et	Мs	H
E -	п Н	Ī	CHMeSMe	Иs	H
Et Et	п	Ī	CHMeSO _z Me	Ms	H
E C	H	Ī	CH2SCH2CH2OMe	Ms	H
Et	H	Ī	CH ₂ OCOMe	Ms .	H
Et-	H	I	CHMeOCOMe	Ms	H
Et	H	I	CH z OSO z Me	2K	H
Et	H	I	CHMeOSOzMe	Ms	H
Pr-i	H	I	CH ≥OH	Ms	H
Pr-i	H	I	CH ₂ 0Me	Ms	H H
Pr-i	H	I	CH ₂ OMe	CI	Ħ
Pr-i	H	I	CH zOMe	MeS	Ħ
Pr-i	H	Ī	CH ₂ OMe	MeSO	Ĥ
Pr-i	Ħ	Ť	CH ₂ OEt	Ms	H -

•	<u>A</u>	ā	Х	Y	\overline{z}	Ę.
5	Pr-i	H	Ī	CH _z 0Et	Cl	H
	Pr-i Pr-i	H	Ī	CH ₂ OE t	MeS	
	Pr-i	H H	i	CH ₂ OE t	MeS0	нннннн
10	Pr-i	H	i i	CH≥OP∓-i	Ms	Ħ
	Pr-i	H .	Ţ	CH ₂ OPr-n	Ms	H
	Pr-i	H -	į T	$CH_zOCH = CH_z$	Ms	H
	Pr-i	H	Ĭ	CH ₂ OCH ₂ CH=CH ₂	ds	H
	Pr-i	H	ľ	CH ₂ OCH ₂ C ≡ CH	Ms	H
15	Pr-i	Ĥ	T	CH ₂ OCH ₂ CH ₂ C1 CHMeOH	Ms	H
	Pr-i	H	Ť	CHMeONe	Ms	H
	Pr-i	Ĥ	Ť	CHMeONe	· Ms	H
	Pr-i	H	î	CHMeOMe	C1 MeS	H
20	Pr-i	. Н	Ī	CHMeOMe	nes Meso	H H
	Pr-i	H	Ī	CHMeOEt	neso Ms	n H
	Pr-i	H	. I	CHMeOCH = CH ₂	Ms	H
	Pr-i	H .	Ι.	CHMeOCH = CH 2	Ms .	H
25	Pr-i	H	Ĭ	CHMeOCH2CH = CH2	Ms	Ħ
	Pr-i Pr-i	H	Ī	$CHMeOCH_2C = CH$	Ms	$\vec{\mathbf{H}}$
	Pr-i	H H	Ţ	CHMeOCH 2CH 2C1	Ms	H
	Pr-i	H	i T	CMe _z OH	Мs	H
	Pr-i	Ħ	i T	CMezOMe CMezOEt	Ms	Ħ
30	Pr-i	Ĥ	· †	CH ₂ CH ₂ OMe	Ms	H
	Pr-i	H	Ī	CH ₂ CH ₂ OE:	Ms	H
	Pr-i	H	i	CHE tOH	Ms Ms	H
	Pr-i	H	Ī	CHE tOMe	ns Ms	H
35	Pr-i	H	I	CHEtOEt	Ms 2Ms	n
	Pr-i	H	I	CH2OCH2CH2OMe	Ms	ннининнин
	Pr-i	H	Ī	CHMeOCH z CH z OMe	Ms	Ħ
	Pr-i Pr-i	H H	Ī	CHzNMez	Ms	H
40	Pr-i	n H	į. F	CHMeNMe =	2M	H
	Pr-i	H	<u>i</u>	CH ₂ CH ₂ HMe ₂	Ms	H
	P i	H	I T	CH ₂ OCH ₂ Ph	- Ms	H
	Pr-i	H	i. T	CHMeOCH zPh	Мs	H H
4 5	Pr-i	H	Ţ	CHzOCHzCOzMe CHzOCHzCOzEt	Ms M-	H
•3	Pr-i	H	į	CH20CHMeCO2Me	ns Ns	Ħ T
	Pr-i	H	Ī	CH ₂ CN	ns Ms	H H H
	Pr-i	H	Ī	CH ₂ SMe	Ms	п Н

À	В	X	Y	2	Ę,
Pr-i	Н	Ī	CH _z SE t	Мs	H
Pr-i	Ħ	ī	CH _z SOMe	Ms	Ħ
Pi	H H	ī	CH _z SO _z Me	Ms	H .
Pr-i	Ħ	Ť	CH ₂ SO ₂ Et	Ms	H
P r -i	П Н	Ť	CHMeSMe	Ms	H
Pr-i	H	Ť	CHMeSO ₂ Me	Ms	Ħ
Pr-i	n	Ī	CH ₂ SCH ₂ CH ₂ OMe	Ms	H
Pr-i	n H	Ť	CH_OCOMe	ZĽ	H
Pr-i	17	Ť	CHMe0C0Me	Ms	H
Pr-i	H	Ť	CH ₂ OSO ₂ Me	Ms	H
Pr-i	H	Ť	CHMeOSO _z Me	. Xs	H-

0 282 944

	A	E	X	Y	Z	G.
5	Мe	Н	Εŧ	CH ₂ OH	Ms	
	Me	Ħ	Et	CH ₂ OMe		<u> </u>
	Иe	Ħ H	Et	CH ₂ OHe	Ms CI	п
	Иe	11	Et		CI	H T
10	Me	H H	Et	CH ₂ 0Me	HeS	H
	Ме	17.	Et	CH ₂ 0Me	деSO	H _.
	Me	H H		CH ₂ OEt	Мs	Ħ
	Ме	n tt	Et	CH ₂ OEt	CI	H H H H H H H H H H H H H H H H H H H
	ne Me	<u>п</u> 11	Et:	CH ₂ OE t	MeS	H
15		<u>н</u> н н	Et	CH ₂ OE t	MeS0	H
	Ме	п	Et	CH=OPr-i	Ms	H .
	Me	H	Et	CH ₂ OP _T -n	Ms	H
	Me (H H H	Et	CH ₂ OCH = CH ₂	Ms	H
	Ме	H	Et	CH ₂ OCH ₂ CH=CH ₂) at	H
20	Ме	H	Et	CH ₂ OCH ₂ C ≡CH	Ms	H
	Me	H	Et	CH ₂ OCH ₂ CH ₂ CI	Ms	H
	Me	H	Et	CHMeOH	Ms	H
	Ме	<u>H</u> .	Et	CHMeOMe	Ms	- H
	Me	H H H H H H H	Et	CHMeOMe	C1	H
25	Йe	H	Et	СНМеОМе	MeS	H
	Мe	H	Et	CHMeOMe	MeS0	H
	Мe	Ħ	Εt	CHMeOEt	zM	H
	Иe	H	Εŧ	CHMeOCH = CH ₂	Ms	H
30	Мe	H H	Et	CHMeOCH = CH ₂	Ms	H
30	Мe	H	Et	CHMeOCH ₂ CH = CH ₂	Ms	·H
	Мe	. <u>H</u>	Et	CHMeOCH ₂ C ≡ CH	Ms	H
	Me	H H	Et	CHMeOCH _z CH _z CI	Ms	H
	Мe	H	Et	CMezOH	zK	H
35	Me	H	Εt	CMe:OMe	Ms	H .
	Ме	H	Et.	CMe _z 0E t	Ms	H H H I
	fle .	H	Et	CH _z CH _z OMe	Ms	
	Мe	H	Et	CH ₂ CH ₂ OE t	Ms	H
	Me	H	Et	CHE tOH	Ms	H
40	Йe	H	Et	CHE tOMe	zň	Н
	Me	H	Et	CHE tOE t	Ms	H
	Мe	H	Et	CH ₂ OCH ₂ CH ₂ OMe	Ms	H
	Мe	H	Et	CHMeOCH = CH = OMe	zň	H
45	Me	H ·	Et	CHzNMez	Ms	H
45	Мe	H	Et	CHMeNMe _z	Ms	H
	Me	H	Et	CH ₂ CH ₂ NMe ₂	Ms .	H
	lle	H	Et	CH20CH2Ph	Ms ·	H

5	<u>A</u>	5	X	Y	\overline{z}	Q
,	Me	H	Et	CHHeOCH 2Ph	Ms	Ħ
	Мe	H	Et	CH = OCH = CO = Me	Ms	Ħ
	Me	H	Et	CH2OCH2CO2Et	Ms	наннинниннинн
	Me	H	Et	CH ₂ OCHMeCO ₂ Me	Ys	ÿ
)	Me	Ĥ	Et	CH ₂ CN	ns Ns	H
	Me	Ä	Et	CH _z SMe	Ms	n T
	Ме	Ħ	Et	CH ₂ SEt	Ms	17
	Иe	Ä	Et	CH _z SOMe	Ms	17
	Ме	H H H H	Et	CH ₂ SO ₂ Me	ns Ns	T T
	Иe	H	Et	CH ₂ SO ₂ Et	ris Ms	п
	Иe	n n	Et	CHMeSMe -	ns Ms	<u>п</u>
	ne Me	H H H H	Et Et			n
	ne Me	T.		CHMeSOzMe	Ms V-	1
,		Д 17	Et	CHzSCHzCHzOMe	Ms	n
'	Ме	<u>n</u>	Et	CH ₂ OCOMe	Ŋs	H
	Иe	H	Et	CHMeOCOMe	2M	<u>H</u>
	Ме	Н	Et	CH20S0zMe	Ms	H
	Me	H	Et	CHMeOSO₂Me	Ms	H
	Et	H	Et	CH _z OH	Ms	H
	Et	H	Eŧ	CH ₂ OMe	Ms	H
	Et	H	Et	CH ₂ OMe	Cl	H
	Et	H	Et	CH ₂ OMe	MeS	H
	Et	H	Et	CH zOMe	MeSO	H
)	Et	H	Et	CH ₂ OEt	Ms	H
	Et	H	· Et	CH ₂ OEt	C1	H
	Et	H	Et	CH ₂ 0Et	MeS	. Н Н
	Et	H	Et	CH ₂ OE t	MeS0	· H
	Et	H	Et	CHzOPr-i	Ms	Ħ
5	Et	H	Et	CH ₂ OPr-n	Ms	Ħ
	Et	Ħ	Et	CH ₂ OCH = CH ₂	Ms	Ħ
	Et	. H	Et	CH = OCH = CH = CH =	Ms .	Ħ
	Et	H	Ēŧ	CH ₂ OCH ₂ C = CH	Ms	H
	Et	Ħ	Et	CH ₂ OCH ₂ CH ₂ Cl	Ms	Ĥ
)	Et	Ĥ	Εċ	CHMeOH	Ms	H
	Et	Ĥ	Et	CHMeOMe	Ms	H
	Es	H	Et	СИМеоме	Cl	H
	Et	H	Et	Симерне	MeS	H
	Et	H	E t	CHMeONe		H
5	Et	H .			MeS0	H
	Et .		Et	CHMeOEt	zK -	n H
	Et	H H	Et	CHMeOCH = CH _z	Ms V-	H H
	Et.	п	Et	CHMeOCH = CH:	Ms	п

0 282 944

	A	В	X	Y	Z	
5	Et	Н	P.		•	
	Et	п Н	Et	CHMeOCH ₂ CH = CH ₂	Жs	Ħ
	Et	H	Et	CHMeOCH ₂ C≡CH	Ms	ннниннинннинниннинниннинн
	Et	а Н	Et	CHMeOCH 2CH2C1	Ms	H
10	Et	H	Et	CMe = OH	Ms	H
	Et	H	Et	CMe = OMe	Мs	H
	Et	H	Et	CMezOEt	Ms	H
	Et	H	Et	CH ₂ CH ₂ OMe	Иs	H
	Et	n H	Et	CH ₂ CH ₂ OEt	Ms	H
15	Et	П 17	Et Et Et	CHE toh	Ms	Ħ
	Et	H	E C	CHE tOMe	Ms	H
	Et	H	£ 5	CHE tOE t	Мs	H
	Et	H	EE	CH2OCH2CH2OMe	Ms	H
	Et	H H	Et Et	CHMeOCH 2CH 2OMe	Ms	H
20		11	EL	CHzNMez	Иs	H
	Et	Ħ	Et	CHMeNMe ₂	Ms	H
	Et	H	Et	CH _z CH _z NMe _z	Ms	Ħ
	Et	H	Et	CH ₂ OCH ₂ Ph	Ms -	H - · · ·
25	Et	Ħ	Et	CHMeOCH 2Ph	Ms	Ħ
25	Et	H	Et	CH ₂ OCH ₂ CO ₂ He	Мs	H -
	Et	H H	Et	CH2OCH2CO2Et	Ms	H
	Et	H	Et	CH2OCHMeCO2Me	2K	H
	Et	H	Et	CH ₂ CN	Ms	H
30	Et	H	Et.	CH ₂ SMe	. Ms	H
	Et	H	Et	- CH _z SE t	Ms	H
	Et	H	Et	CH ₂ SOMe	Ms	Ħ
	Et	H	Et	CH ₂ SO ₂ Me	Ms	H
	Et	<u>H</u>	Et	CH ₂ SO ₂ Et	Жs	H
35	Et	H	Et	CHMeSMe	Ms	. H
	Et Et	H	Et	CHMeSO zMe	Мs	H
		H	Et	CHzSCHzCHzOMe	Ms	H.
	Et	H	Εt	CH ₂ OCOMe	zК	H H
	Et	H	Et	СНИеОСОМе	2M	
40	Et	H	Et	CH ₂ OSO ₂ Me	Ms	H H
	Et	H	Et	CHMeOSO zMe	Ms	H
	Pr-i	H	Et	CH 20H	Ms	H
	Pr-i	H	Et	CH _z OMe	Ms	H H H
45	Pr-i	H	Et	CH _z OMe	Cl	H
	Pr-i	H ·	Et	CH _z OMe	MeS	H
	Pr-i	H	Et	CH _z OMe	MeSO	H H
	Pr-i	H	Et	CH ₂ OEt	Ms	H

5	A	Б	Х	Y	Z	Ę.
3	Pr-i	H	Et	CH ₂ OEt	Cl	H
	Pr-i	H	Et	CH ₂ OE t	MeS	Ħ
	Pr-i	H H	Et	CH ₂ OEt	MeSO	H H H
	Pr-i	Ħ	Et	CH ₂ OPr-i	Ms	Ħ
10	P . - i	Ĥ	Et	CH ₂ OPr-n	Ms	Ħ
	Pr-i	Ħ	Et	CH _z OCH = CH _z	Ms	Ħ
	P r -i	Ħ	Eŝ	CH ₂ OCH ₂ CH=CH ₂	ZK ZK	н
	P - -i		Et	CH₂OCH₂C ≡CH	Ms	Ĥ
	Pr-i	H .	Et	CH ₂ OCH ₂ CH ₂ CI	Ms	Ħ
15	P r -i		Et	CHMeOH	Ms.	Ä
	Pr-i	H H	Et	CHMeOMe	Ms	Ĥ
	Pr-i	н 	Et	CHMeOMe	C1	Ħ
	P r -i	Ħ	Et	CHMeOMe	MeS	ਸ਼ੌ
20	Pr-i	H H H	Et .	CHMe9Me	MeSO	Ĥ
	Pr-i	Ħ	Et	CHMeOE t	Ms	ਸ਼ੌ
	P r -i	Ħ	Et	CHMeOCH = CH ₂	Ms	H
	Pr-i	Ħ	Et	CHMeOCH = CH ₂	ZK ZK	Ħ
	Pr-i	H _.	Et	CHMeOCH ₂ CH = CH ₂	Ms	Ħ
25	Pr-i	H	Et	CHMeOCH₂C≡CH	Ms .	ਸ਼ਿੰ
	Pr-i	H	Et	CHMeOCH _z CH _z Cl	Ms	ннннннннннннннн
	Pr-i	H	Et	CMe ₂ OH	Ms	ij
	Pr-i	H	Et	CMe ₂ OMe	Ms	ਸ .
	Pr-i	H	Et	CMe ₂ OEt	Ms	H H
30	Pr-i	Ħ	· Et	CH _z CH _z OMe	Ms	H
	Pr-i	H	Et	CH ₂ CH ₂ OHe CH ₂ CH ₂ OE t	ns 2M	H H
	Pr-i	H	Et	CHE ±OH	Ms	ä
	Pr-i	H	Et	CHE tOMe	Ms	Ħ
35	Pr-i	H	Et	CHE ±0E ±	Ms	H ''
	Pr-i	H	Et	CH _z OCH _z CH _z OMe	Ms	Ħ
	Pi	H	Et	CHHeOCH ₂ CH ₂ ONe	ăs	H H H H H H H
	Pr-i	H	Et	CH ₂ HHe ₂	iis Ns	H .
	Pr-i	H	Et	CHMeNMe ₂	Ms	Ĥ
40	Pr-i	H	Et	CH ₂ CH ₂ NMe ₂	Ms	ij
	Pr-i	H.	Et	CH ₂ OCH ₂ Ph	ZK ZK	Ĥ
	Pr-i			CHYOCH 2Ph	ns Ns	
	Pr-i	H H	Et =+	CH ₂ OCH ₂ CO ₂ He	zr. Zr.	H H
	Pr-i	n H	Et	CH ₂ OCH ₂ CO ₂ Ei	ZK ZK	Ħ
45	Pr-i	n H	Et	CH 20CHMeCO 2Me	ns Ns	н
	Pr-i	п Н	Et	CH ₂ CN	ns Ms	Ħ
	Pr-i	п Н	Et Et	CitzShe	ns Ms	H H H H
	LL-1	п		UNZONE	112	

0 282 944

<u>A</u>	E	X	Y	Z	Ç.
Pr-i Pr-i Pr-i Pr-i Pr-i Pr-i Pr-i	H H H H H H H H H H H H H H H H H H H		CH ₂ SEt CH ₂ SOMe CH ₂ SO ₂ Me CH ₂ SO ₂ Et CHMeSMe CHMeSO ₂ Me CH ₂ SCH ₂ CH ₂ OMe CH ₂ OCOMe CHMeOCOMe CH ₂ OSO ₂ Me CHMeOSO ₂ Me	Ms Ms Ms Ms Ms Ms Ms Ms	нннннннн

•	A	Ξ	X	Y	Z	Q
5	Иe	Мe	Br	CH ₂ OH	Иs	H
	Мe	Иe	Br	. CH zOMe	iis Iis	n n
	Иe	Мe	Br	CH ₂ OMe	CI	17
	Мe	Me	Br	CH ₂ OMe	MeS	II.
0	Иe	Мe	Br	CH ₂ OMe	MeSO	П 17
	Мe	Йe	Br	CH ₂ OE ±	ils Ils	П 77
	lle	Йe	Br	CH ₂ OE t	CI	H H H H H
	Иe	Me	Br	CH ₂ OEt	MeS	п
	Me	Мe	Br	CH ₂ OEt		H
5	Me	Иe	Br	CH ₂ OPr-i	NeSO	. H H H
	Мe	Иe	Br	CH ₂ OPr-n	Иs У-	11
	lle	Иe	Br	$CH_{2}OCH = CH_{2}$	Ms u_	n
	Me	Иe	Br		Ns.	H .
,	Иe	Ме		CH ₂ OCH ₂ CH=CH ₂	Ms	H
,	Йe	Me	Br P-	HD≡ O ₂ HOO ₂ HD	Ms	H
	Иe	ne Me	Br	CH ₂ OCH ₂ CH ₂ CI	ils	Ħ
	Me		Br	CHMeOH	Ms	ннннн
	ne Ne	Me	Br	CHMe0Me	Ms	H
;	ne Me	Ме Ч-	Br	CHMe0Me	CI	H
	ne Me	Йe	Br	СНМеОМе	MeS	H
	ne Me	Me	Br	CHMeOMe	MeSO	H
		йe	Br	CHMeOE t	Ms	H
	Me M-	Ме	Br	CH ₂ CH ₂ OMe	Ms	H
)	Иe	Ме	Br	CH ₂ CH ₂ OE t	zk	H
	Иe	Ме	Br	CHE tOH	Ms	H
	Me .	Ме	Br	CHE tOMe	Мs	H
	Ме	Иe	Br	CHE tOE t	Ms	H
	Мe	Йe	Br	CHzOCHzCHzOMe	Ms	H
5	Ме	Me	Br	CH2:\Me2	Ms	H
	Me	Мe	Br	CH2OCH2Ph	2M	H
	Яe	Иe	Br	CH _z OCH _z CO _z He	- Ms	H
	Иe	Мe	Br	CH ₂ OCH ₂ CO ₂ Et	Ms	H
)	Мé	Иe	Br	CH = OCHMeCO = Me	Ms	H
	Me	Ме	8r	CH zCN	гK	H
	Ме	Ме	Br	CH _z SMe	Ms	H
	Мe	Мe	Br	CH ₂ SE t	Ms	
	Me	Мe	Br	CH ₂ SO ₂ Me	zK	H H H
;	Me	Мe	Br	CH2SO2Et	Ms	Ĥ
	Мe	Мe	Br	CH2SCH2CH2OMe	Ms	Ħ
	Me 🏸	Иe	Br	CH zOCOMe	Ms	Ĥ
	Me	Me	Br	CHMeOCOMe	Ms	Ħ

5	A	Б	Х	Y	Z	&			
	Мe	Ме	Br	CH ₂ OSO ₂ Me	Ms	17			
	Me	Me	Br	CHMe0S0z.Me	ns Ms	нннининнинниннинниннин			
	Εŧ	Мe	Br	CH ₂ OH	ns Ms	11			
	Ε±	Ме	Br	CH _z OMe		Ħ			
10	Et Et	Me	Br	CH ₂ OMe	Ms	H			
	Et	Ме	Br	CH ON-	C1	H			
	Et	Me	Br	CH _z OMe	MeS	H			
	Et	Me		CH ₂ OMe	MeS0	H			
	Et	Иe	Br	CH ₂ OEt	Ms	H			
15	Et		Br	CH ₂ OEt	Cl	H			
	Et	ile M	Br	CH ₂ OE t	MeS	H			
		Иe	Br	CH = OE t	MeS0	H			
	Et	Иe	Br	CH _z OPr-i	Ms	H			
00	Et	Мe	Br	CH ₂ OPr-a	Ms	H			
20	Et	Me	Br	$CH_zOCH = CH_z$	Ms	Ħ			
	Et	Мe	Br	CH ₂ OCH ₂ CH=CH ₂	Ms	Ħ			
	£ŧ	Мe	Br	CH ₂ OCH ₂ C ≡ CH	Ms ·	Ħ			
	Et	Мe	Br .	CHzOCHzCHzC1	zK .	ਸ਼			
25	Et	Мe	Br	CHMeOH	Ms	H			
25	Et	. Me	Br	CHMeOMe	Ms	g			
	Et	· Me	Br	CAMe0Me	CI	II.			
	Et	Мe	Br	CHMeOMe	MeS	11			
	Et	Me	Br	CHMe0Me	MeSO	11 17			
30	Εt	Me .	Br	CHMeOE t		П			
	Et	Me	Br	CH ₂ CH ₂ OMe	ăs Ma	H			
	Et	Me	Br	CH ₂ CH ₂ OEt	Ms	H			
	Et	Ме	Br	CHEtOH	Ms	Η̈́			
	Fi	Ме	Br		Ms	H			
35	Et Et	Me	Br	CHE tOMe	Ms	H			
	F÷	Иe		CHEtOEt	Ms	H :			
	Et Et		Br	CH2OCH2CH2OMe	Мs	H H H H H H H H H			
	Et	Ме	Br	CHaNMez	Ms	H			
	E 5	Ме	Br	CHzOCHzPh	Ms	H			
40	Et C:	Ме	Br	CHzOCHzCOzMe	Ms	H			
	Et	Мe	Br	CH2OCH2CO2Et	Ms	\mathbf{H}			
	Et	Me	Br	CH ₂ OCHMeCO ₂ Me	zĸ	H			
	Es	Мe	Br	CH _z CN	Ms				
	Et	Мe	Br	CH ₂ SMe	Ms	. H			
45	<u>E</u> t	Мe	Br	CH ₂ SE t	zK	$\overline{\mathbf{H}}$.			
	Et	Йе.	Br	CH zSO zMe	Ms	H .			
	Et 🔧	Мe	Br .	CH _z SO _z Et	Ms	H			
	Et.	Me	Br	CH ₂ SCH ₂ CH ₂ OMe	Ms	Н Н Н Н			

5	A	В	×	Y.	\overline{z}	G.
	Et	Йe	Br	CH ₂ OCOMe	Ms	H
	ΕĖ	Йe	Br	CHMe0COMe	ds As	<u>п</u>
	Εt	Йe	Br	CH ₂ OSO ₂ Me	ns Ms	<u>п</u>
	Et	Йe	Br	CaMeOSO zive	ns 2K	<u></u>
10	Pr-i	Ме	B r	CH ₂ OH		n 7
	P	Иe	. Br	CH ₂ OMe	Ms V-	H
	pi	Me	Br	CH ₂ OHe	Ms	Щ
	P . -i	Иe	Br	CH ₂ ONe	CI	Ħ
15	P . - i	Мe	Br	CH AN-	MeS	Ħ.
15	Pr-i	Ме	Br	CH ₂ 0Me	CZeK	Ħ
	P r -i	Иe		CHzOEt	Ms	Ħ
	Pr-i	ile ile	Br	CH ₂ OE t	CI	H
	P r -i	ne Me	Br	CH ₂ OEt	MeS	H
20	Pr-i	ne Ne	Br B-	CH ₂ OEt	MeSO	H.
	P - -i		Br	CH ₂ OP _T -i	Ms	Н
	Pr-i	Ме	Br	CH ₂ OP ₇ -a	Мs	H
		Me Y-	Br	$CH_zOCH = CH_z$	Ms	H
	Pr-i	Йe	Br	CH ₂ OCH ₂ CH=CH ₂	Ms	H
25	Pr-i	Ме	Br	CH ₂ OCH ₂ C ≡ CH	zK	H .
•	Pr-i	Иe	Br	CH20CH2CH2C1	Ms.	ннининининининининининининини
	Pr-i	Иe	Br	CHMeOH	Ms	H
	Pr-i	Иe	Br	СНМеОМе	zK	H
	P=-i	Иe	Br	CHMeOMe	CI	H
30	Pr-i	Ме.	Br	СНМеОМе	MeS	H
	Pr-i	Me	Br	CHMeOMe	MeSO	H
	Pr-i	Me	Br	CHMeOE:	zří	H
	Pr-i	Йe	Br	CH ₂ CH ₂ OMe	Ms	Ħ
05	Pr-i	Ме	Br	CH _z CH _z OE ±	Ms	H
35	Pr-i	Мe	Br	CHE ±OH	Иs	H
	P=-i	Мe	Br	CHE :OMe	zĸ	H
	Pr-i	Ме	Br	CHE tOE t	zK	H
	Pr-i	Мe	Br	CH ₂ OCH ₂ CH ₂ OMe	zří	H
40	Pi	Me	Br	CH = NMe =	Ms	H
	Pr-i	Мe	Br	CH zOCH zPh	2K	H H
	Pr-i	Мe	Br	CH ₂ OCH ₂ CO ₂ Me	Ms	Н
	Pr-i	Мe	Br	CH zOCH zCO zE t	Ms	H
	Pr-i	Мe	Br	CH ₂ OCHMeCO ₂ Me	Ms	H H H H
45	Pr-i	Мe	Br	CH=CN	Ms	Ħ
	Pr-i	Иe	Br	CH _z SMe	Ms	Ħ
	Pr-i	Me	Br	CHzSEt	Ms	Ħ
	P r -i	Иe	Br	CH = SO = Me	Ms	Ħ

0 282 944

<u>A</u>	В	X	Y	· Z	Q
s Pr-i Pr-i Pr-i Pr-i Pr-i	Me Me Me Me Me Me	Br Br Br Br Br	CH ₂ SO ₂ Et CH ₂ SCH ₂ CH ₂ OMe CH ₂ OCOMe CHMeOCOMe CH ₂ OSO ₂ Me CHMeOSO ₂ Me	Ms Ms Ms Ms Ms	H H H H

5	A	Б	X	Y	Z	Q.
•	Me	Ме	I	CH ₂ OH	Иs	H
	Me	Me	I	CH ₂ OMe	Ms	Ħ
	Йe	Мe	I	CH 20Me	Čl	H H
	Иe	Мe	I	CH₂OMe	MeS	ä
10	Иe	Иe	I	CH ₂ OMe	MeSO	T.
	lie	Иe	Ĭ	CH _z OE t	Ns.	. []. []
	Me	Иe	Ī	CH ₂ OE t	C1	H H H H H
	Me	Иe	ī	CH ₂ OE t	MeS .	п
15	Мe	Мe	ī	CH ₂ OE t	MeSO	H H H
,,	Иe	Иe	Ī	CH _z OPr-i	Ms	П
	Мe	Йe	Ť	CH ₂ OPr-n		<u>п</u> 11
	Me	lle	Ť	$CH_2OCH = CH_2$. Ns	H . H
	Мe	Ме	Ť	$CH_2OCH_2CH=CH_2$	iis Ya	П
20	Иe	Иe	Ť	CH ₂ OCH ₂ C ≡ CH	žis L	H H
	Me	Ме	Ť	CH ₂ OCH ₂ CH ₂ CI	Ms V-	П
	Иe	Иe	Ť	CHMeOH	Ms	H
	ne Ne	Иe	Ť	CHMeONe -	Ms.	H
	Me	Иe	Ť	CHMeOMe	Ms	H
25	Me	Me	Ť	CHMeOMe	C1	H
	Иe	Иe	Ť	CHMeOMe	NeS X-SO	Ħ
	lle le	Me	Ť	CHMeOE:	MeSO	H
	Иe	Иe	Ť	CH _z CH _z OMe	Ms M-	H
00	Иe	Иe	Ţ	CH ₂ CH ₂ OEt	Ms V-	H
30	Ме	Me	. 1	CHE tOH	Ms	<u>H</u> -
	Иe	Me	Ţ	CHE tOMe	Ms	H
	Иe	Иe	ľ	CHE tone CHE to E t	Ms	H
	Ме	Ме	ľ	CH 20CH 2CH 2OMe	Ms	H
35	Ме	Иe	Ī	CH 2NMez	Ms	H
	lie	Ме	I T	CH ₂ OCH ₂ Ph	Ms	H
	Ме	Me	I. T	CH ₂ OCH ₂ CO ₂ Me) is	H
	ite	Me	Ţ	CH OCH CO C:	aK,	H
	Me	ile ile	I T	CH2OCH2CO2Et	Дs	H
40	Ме		I I	CH ₂ OCHMeCO ₂ Me	Жs	H
	ne Me	Ме	Ī	CH ₂ CN	Ms .	H
	йe	Ме		CH ₂ SMe	Ms	H
	ne Me	Ме	Ţ	CH ₂ SEt	Ms	H H
	ne Me	Йe	l r	CH _z SO _z Me	Ms	H
45	ne Me	Ме	i T	CH ₂ SO ₂ Et	Мs	H
		Йe	į,	CH ₂ SCH ₂ CH ₂ OMe	Ms	H
	Me /	Ме	I I	CH ₂ OCOMe	Ms	H H H H
	Me.	Me	ī	CHMe0COMe	Ms	H

		·				
5	<u>A</u>	В	X	Y	Z	Q
J	Мe	Ме	ĭ	CT OCC H		
	Me	Иe	Ť	CH20S0zHe	Ms	H
	Et	Йe	Ţ	CHMeOSÖ≥Me CH≥OH	Ms	. Н Н
	Et	Ме	Ť	CH ₂ OMe	Ms	H
10	Et	Йe	Ť	CH ₂ OMe	Ms	H H H H H H H H
	Et	Йe	Ī		C1_	H
	Εż	Иe	Ī	CH	MeS	H
	Et	Ме	ř	CH z OE t	MeS0	\mathbf{H}_{\cdot}
	Et	Ме	Ţ		Ms	Н .
15	Et	Ме	1	CH_OF+	Cl	H
	Et	Йe	Ť	CH ₂ OEt	MeS	<u>H</u> .
	Εt	Иe	Ť	CH ₂ OEt	MeS0	H
	Et	, Me	ř	CH ₂ OPr-i	Ms	H
20	Et	ne Me	ī	CH ₂ OP _T -n	Ms	<u>H</u> .
	Et	Ме	Ť	CH ₂ OCH = CH ₂	Ms	H
	Et	Me .	Ī	CH ₂ OCH ₂ CH=CH ₂	Ms	H
	Et	Ме	Ť	CH ₂ OCH ₂ C ≡ CH	Ms	H H
	Et	Ме	Ĭ	CH ₂ OCH ₂ CH ₂ CI CHMeOH	Ms	H
25	Et	Йe	Ť	Cameon Cameome	Ms	H
	Et	Ме	. [Chineone Chineone	Ms	<u>H</u> .
	Et	Ме	Ť	Careone Careone	C1	H
	Et	Йe	Ť	CiffeOMe	MeS	H
30	Et	Йe	Ť	CHMeOE:	MeSO	H
30	Et	Me	Ī	CH ₂ CH ₂ OMe	Ŋs .	H H H
	Et	Me	Ţ	CH ₂ CH ₂ OEt	Ms	H
	Εŧ	Me	Ť.	CHE tOH	Ms	H
	Et	Me	Î	CHE tOMe	Ms	H
35	Et	Мe	Ī	CHE to Et	Ms V-	H
	Et	Me	ī	CH ₂ OCH ₂ CH ₂ OMe	Ms H-	H
	Èt	Мe	Ī	CH ₂ NMe ₂	Ms Ms	H
	Et	Мe	ī	CH ₂ OCH ₂ Ph		H . ·
	Εt	Мe	Ī	CH2OCH2CO2Me	Ms Ms	H.
40	Et	Me	Ī	CH ₂ OCH ₂ CO ₂ Et	ns Ms	H
	Et	Йe	Ī	CH = OCHMeCO = Me	ris Ms	H
	Et	Мe	Ī	CH ₂ CN	ns Ms	H
	Et	Ме	Ĩ	CH ₂ SMe	Ms	П u
45	Et	Me	Ī	CH ₂ SEt	ns Ns	H H H
	Et	Me	Ī	CH ₂ SO ₂ Me	Ms	П. U
	Et	Me	ī	CH ₂ SO ₂ Et	ns Ms	П. И
	Et.	Me	Ī	CH _z SCH _z CH _z OMe	ris Ms	H H
•					112	a .

5 .	A	В	X	Y	Z	Ç.
J ,	Et	Ме	ī	CH _z OCOMe	Ms	H
	Et	Ме	I I	CHMeOCOMe	Ms	Ĥ
	Et	Йe	ī	CH ₂ OSO ₂ Me	Ms	Ĥ
	Et	Me	Ī	CHMeOSOzMe	Ms	Ħ
10	P r -i	Me	Ī	CH ₂ OH	Ms	Ħ
	Pr-i	Мe	Ĩ	CH ₂ OMe	2M	H
	Pr-i	Мe	Ī	CH ₌ OMe	CI	. Н
	Pi	Ме	Ī	CH ₂ OMe	MeS	H
15	Pr-i	Мe	I	CH ₂ OMe	MeSO	H
	Pr-i	Мe	I	CH ₂ OE t	Ms	H
	Pr-i	Мe	I	CH ₂ OE t	Cl	H
	Pr-i	Me	I	CH _z OE t	MeS	
	Pr-i	Me	I	CH ₂ OE t	MeS0	Ħ
20	Pr-i	Мe	I	CH ₂ OP r -i	Ms	Ħ
	Pr-i	Мe	I	CH ₂ OPr-n	Ms	H
	Pr-i	Йe	I	CH ₂ OCH = CH ₂	Ms	H
	Pr-i	Мe	Ī	$CH_2OCH_2CH = CH_2$	Ms	Ħ
25	Pr-i	Мe	Ī	CH ₂ OCH ₂ C ≡ CH	Ms	H
-	Pr-i	Мe	Ī	CHzOCHzCHzC1	Мs	n n
	Pr-i	Мe	Ī	СНМеОН	ЗДS	H
	Pr-i	Ме	Ī	СНМеОМе	Ms	H
	Pr-i	Мe	Ī	CHMeOMe	C1	H
30	Pr-i	Ме	. <u>I</u>	CHMeOMe	MeS MeS0	Ħ
	Pr-i	Ме		CHMeOMe	Ms	H
	Pr-i	Ме	Ī	CHMeOEt	ns Ms	H
	Pr-i	Ме М-	I I	CH ₂ CH ₂ OMe	ns Ms	H
35	Pr-i	Ме Ме	I	CH₂CH₂OE t CHE tOH	Ms	H
	Pr-i Pr-i	ne Me	Ī	CHE tOMe	Ms	Ħ
	Pr-i	ne Me	Ţ	CHE tOE t	Ms	H H H H
	Pr-i	Me	Ī	CH ₂ OCH ₂ CH ₂ OMe	Ms	Ħ
	Pr-i	Иe	Ĭ	CH _z NMe _z	Ms	Ĥ
40	Pr-i	Ме	Ť	CH ₂ OCH ₂ Ph	Ms	Ĥ
	Pr-i	Ме	Ť	CHzOCHzCOzMe	Ms	H
	Pr-i	Ме	Ï	CH2OCH2CO2Et	Ms.	H
	Pr-i	Иe	Ī	CH=OCHMeCO≥Me	Ms	H
45	Pr-i	.Me	Î	CH = CN	Ms	H
. •	Pr-i	Ме	ĵ	CH _z SMe	Ms	H
	Pr-i	Иe	Î	CH _z SE t	2K	H
	Pr-i	Иe	Ī	CH zSO ziye	zK	H

	A	E	Х	Y	Z	Q.
5	Pr-i	Ме	Ī	CH2SO2Et	Ms	H
	P r -i P r -i	Me Me	I I	CH=SCH=CH=OMe CH=OCOMe	Ms Ms	H H
	Pr-i Pr-i	Ие Ие	Ţ	CHHeOCOMe	Ms M-	H
10	Pr-i	ne Me	I	CHzOSOzMe CHMeOSOzMe	Ms Ms	H H

-	A	E	Х	Y	Z	Q
5	Me	Me	Et	CH _z OH	Иs	H
	Йe	Ме	Et	CH _z OMe	Ms	Н
	Ме	Ме	F t	CH ₂ OMe	C1	H
	Ме	Ме	Es Es Es	CH = OMe	MeS	Ħ
10	Иe	Ме	• स	CH ₂ OMe	MeSO	Ħ
	Ме	Ме	F÷	CH = OE t	Ms 2K	H
	Me	Иe	Et	CH ₂ OE t	CI	H
	Me	Иe	Et	CH ₂ OEt	МеS	H
	Иe	Ме	Et	CH 20E t	MeSO	H H
15	Ме	Иe	Et	CH ₂ OP r -i	Ms	н
	Иe	Me	Et	CH ₂ OPr-n	Ms	H
	Йe	Иe	Et	$CH_2OCH = CH_2$	ns .	H
	йe	Me	Et	$CH_2OCH_2CH=CH_2$	Ms	H
20	Ме	Me	Et	CH ₂ OCH ₂ C ≡ CH	Ms	H
	Мe	. Me	Et	CH ₂ OCH ₂ CH ₂ Cl	Ms	H
	Me	Иe	Et	CHMeOH	XIS	ਸ
	Иe	Ме	Et	CHMe0Me	Ms	Ä
	Иe	Me	Et	CHMeoMe	Cl	
25	Йe	Иe	Et	CHMe0Me	MeS	Ħ
	Me	Ме	Et	CHMe0Me	MeSO	H H
	Ме	Иe	Ét	CHMeOEt	Ms	Ħ
	Ме	Ме	Et	CH _z CH _z OMe	Ms	H
20	Иe	Ме	Et	CH ₂ CH ₂ OE ±	zK	H
30	Me	Ме	Et	CHE ±OH	žľs.	H
	Мe	Ме	Et	CHE tOMe	2M	Ĥ
	Йe	Me	Ēt	CHE tOE t	Ms ·	H H H H
	Мe	Мe	Et	CH ₂ OCH ₂ CH ₂ OMe	Иs	H
35	Me	Мe	Et	CH ₂ NMe ₂	Ms	H
	Мe	Ме	Εt	CH ₂ OCH ₂ Ph	Ms	H
	Нe	Ме	Et	CHzOCHzCOzMe	Ms	H H
	lle	Мe	Et	CH2OCH2CO2Et	Ms	H
	Мe	Йe	Et	CH 20CHMeCO 2Me	Ms	H H H
40	Me	Ме	Et	CH ₂ CN	Ms	H
	Иe	Мe	Et	CH₂SMe	гM	
	Мe	Мe	Et	CH 2SE t	Ms	H
	Мe	Мe	Et	CH _z SO _z Me	Ms	H
45	Иe	Мe	Ēŧ	CH ₂ SO ₂ Et	Ms	H H
.5	Me	ille	Et	CH = SCH = CH = OMe	Ms	H
	ite -	Йe	Et	- CH = OCOMe	Ms	H
	Me	Йe	Et	CHMe0C0Me	zK	H

Me Me Et CH_2OSO_2Me Ms H	5	A	B	X	Y	z	Ç.
Et Me Et CH₂OH Ms H Et Me Et CH₂OMe Ms H Et Me Et CH₂OMe CI H Et Me Et CH₂OMe MeS H Et Me Et CH₂OMe MeS H Et Me Et CH₂OMe MeS H Et Me Et CH₂OMe MeS H Et Me Et CH₂OEt Ms H 15 Et Me Et CH₂OEt MeS H Et Me Et CH₂OEt MeS H Et Me Et CH₂OEt MeS H Et Me Et CH₂OEt MeS H Et Me Et CH₂OEt MeS H Et Me Et CH₂OET MeS H Et Me Et CH₂OET MeS H Et Me Et CH₂OET Ms H Et Me Et CH₂OCH₂CH = CH₂ Ms H Et Me Et CH₂OCH₂CH = CH₂ Ms H Et Me Et CH₂OCH₂CH = CH₂ Ms H Et Me Et CH₂OCH₂CH CH₂CI MS H Et Me Et CH₂OCH₂CH₂CI MS H Et Me Et CH₂OCH₂CH₂CI MS H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMEOMe Ms H Et Me Et CHMEOMe Ms H Et Me Et CHGCH₂CH₂OHe Ms H Et Me Et CHGCH₂CH₂OHe Ms H Et Me Et CH₂OCH₂CH₂OHe Ms H Et Me Et CH₂OCH₂CH₂OHe Ms H Et Me Et CH₂OCH₂CO₂Et Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Et Me Et CH₂COLEC Ms H Et Et Me Et CH₂COLEC Ms H Et Et CH₂COLEC Ms H Et Et CH₂C	J				CH ₂ OSO ₂ Me		H
Et Me Et CH₂OH Ms H Et Me Et CH₂OMe Ms H Et Me Et CH₂OMe CI H Et Me Et CH₂OMe MeS H Et Me Et CH₂OMe MeS H Et Me Et CH₂OMe MeS H Et Me Et CH₂OMe MeS H Et Me Et CH₂OEt Ms H 15 Et Me Et CH₂OEt MeS H Et Me Et CH₂OEt MeS H Et Me Et CH₂OEt MeS H Et Me Et CH₂OEt MeS H Et Me Et CH₂OEt MeS H Et Me Et CH₂OET MeS H Et Me Et CH₂OET MeS H Et Me Et CH₂OET Ms H Et Me Et CH₂OCH₂CH = CH₂ Ms H Et Me Et CH₂OCH₂CH = CH₂ Ms H Et Me Et CH₂OCH₂CH = CH₂ Ms H Et Me Et CH₂OCH₂CH CH₂CI MS H Et Me Et CH₂OCH₂CH₂CI MS H Et Me Et CH₂OCH₂CH₂CI MS H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMEOMe Ms H Et Me Et CHMEOMe Ms H Et Me Et CHGCH₂CH₂OHe Ms H Et Me Et CHGCH₂CH₂OHe Ms H Et Me Et CH₂OCH₂CH₂OHe Ms H Et Me Et CH₂OCH₂CH₂OHe Ms H Et Me Et CH₂OCH₂CO₂Et Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Me Et CH₂COLEC Ms H Et Et Me Et CH₂COLEC Ms H Et Et Me Et CH₂COLEC Ms H Et Et CH₂COLEC Ms H Et Et CH₂C			Ме	Et	CHMe0S0zMe	Ms	H
Et Me Et CH_OEt MeSO H Et Me Et CH_OEt MeSO H Et Me Et CH_OPT-1 Ms H Et Me Et CH_OPT-n Ms H Et Me Et CH_OCH_=CH_2 Ms H Et Me Et CH_OCH_CH=CH_2 Ms H Et Me Et CH_OCH_CH=CH_2 Ms H Et Me Et CH_OCH_CH=CH_2 Ms H Et Me Et CH_OCH_CCH=CH Ms H Et Me Et CH_OCH_CCH_CO Ms H Et Me Et CHMOH Ms H Et Me Et CHMOME CI H Et Me Et CHMOME CI H Et Me Et CHMOME Ms H Et Me Et CHMOME MeSO H Et Me Et CHMOME MeSO H Et Me Et CHMOME MeSO H Et Me Et CHMODE Ms H Et Me Et CHMODE Ms H Et Me Et CHMODE Ms H Et Me Et CHMODE Ms H Et Me Et CHMODE Ms H Et Me Et CHMODE Ms H Et Me Et CHMODE Ms H Et Me Et CHCOME MS H Et Me Et CHCOME MS H		Εt	Ме	Et	CH ₂ OH	Ms	H
Et Me Et CH₂OEt MeSO H Et Me Et CH₂OEt MeSO H Et Me Et CH₂OEt MeSO H Et Me Et CH₂OPr-i Ms H Et Me Et CH₂OPr-n Ms H Et Me Et CH₂OPr-n Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH□CI Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOMe CI H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H So Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHGETOMe MS H Et Me Et CHGCOGGET MS H	40	Εt	Мe	Εt		Ms	Н
Et Me Et CH₂OEt MeSO H Et Me Et CH₂OEt MeSO H Et Me Et CH₂OEt MeSO H Et Me Et CH₂OPr-i Ms H Et Me Et CH₂OPr-n Ms H Et Me Et CH₂OPr-n Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH□CI Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOMe CI H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H So Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHGETOMe MS H Et Me Et CHGCOGGET MS H	10		Ме	Et	CH ₂ OMe	Cl	H
Et Me Et CH₂OEt MeSO H Et Me Et CH₂OEt MeSO H Et Me Et CH₂OEt MeSO H Et Me Et CH₂OPr-i Ms H Et Me Et CH₂OPr-n Ms H Et Me Et CH₂OPr-n Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH□CI Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOMe CI H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H So Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHGETOMe MS H Et Me Et CHGCOGGET MS H			Мe	Et	CH ₂ OMe	MeS	H
Et Me Et CH₂OEt MeSO H Et Me Et CH₂OEt MeSO H Et Me Et CH₂OEt MeSO H Et Me Et CH₂OPr-i Ms H Et Me Et CH₂OPr-n Ms H Et Me Et CH₂OPr-n Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH□CI Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOMe CI H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H So Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHGETOMe MS H Et Me Et CHGCOGGET MS H			Мe	Et	CH ₂ OMe	MeSO	H .
Et Me Et CH₂OEt MeSO H Et Me Et CH₂OEt MeSO H Et Me Et CH₂OEt MeSO H Et Me Et CH₂OPr-i Ms H Et Me Et CH₂OPr-n Ms H Et Me Et CH₂OPr-n Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH□CI Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOMe CI H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H So Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHGETOMe MS H Et Me Et CHGCOGGET MS H			Иe		CH _z OE t		H
Et Me Et CH₂OEt MeSO H Et Me Et CH₂OEt MeSO H Et Me Et CH₂OEt MeSO H Et Me Et CH₂OPr-i Ms H Et Me Et CH₂OPr-n Ms H Et Me Et CH₂OPr-n Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH□CI Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOMe CI H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H So Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHGETOMe MS H Et Me Et CHGCOGGET MS H	15	Εċ	Йe	Et	CH ₂ OE t	C1	H
Et Me Et CH₂OEt MeSO H Et Me Et CH₂OFt-1 Ms H Et Me Et CH₂OPT-1 Ms H Et Me Et CH₂OPT-1 Ms H Et Me Et CH₂OCH=CH₂ Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH=CH₂ Ms H Et Me Et CH₂OCH₂CH Ms H Et Me Et CH₂OCH₂CO Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOEt Ms H Et Me Et CHMeOEt Ms H Et Me Et CHMeOEt Ms H Et Me Et CHMeOEt Ms H Et Me Et CH₂CH₂OEt Ms H Et Me Et CH₂CH₂OEt Ms H Et Me Et CH₂CH₂OHe Ms H Et Me Et CH₂CH₂OHe Ms H Et Me Et CH₂CH₂OHe Ms H Et Me Et CH₂CH₂OHe Ms H Et Me Et CH₂CH₂OHe Ms H Et Me Et CH₂CH₂OHe Ms H Et Me Et CH₂CH₂OHe Ms H Et Me Et CH₂CH₂OHe Ms H Et Me Et CH₂CH₂OHe Ms H Et Me Et CH₂CH₂OHe Ms H Et Me Et CH₂CH₂OHe Ms H Et Me Et CH₂OCH₂CH₂OHe Ms H Et Me Et CH₂OCH₂CH₂OHe Ms H Et Me Et CH₂OCH₂COhe Ms H		Et	Жe			MeS	H
Et Me Et CH₂OCH₂CE ≡CH Ms H Et Me Et CH₂OCH₂C1 Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOEt Ms H Et Me Et CH₂CH₂OMe Ms H Et Me Et CH₂CH₂OEt Ms H Et Me Et CH€tOH Ms H Et Me Et CHEtOH Ms H Et Me Et CHETOME Ms H Et Me Et CHETOME Ms H Et Me Et CH€TOME Ms H Et Me Et CH₂CH₂OHe Ms H Et Me Et CH₂CH₂CH₂OMe Ms H Et Me Et CH₂CH₂CH₂OMe Ms H Et Me Et CH₂CH₂CH₂CH Ms H Et Me Et CH₂CCH₂CH Ms H Et Me Et CH₂CCH₂CH Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CO₂He Ms H Et Me Et CH₂CO₂He Ms H			Мe			MeS0	H
Et Me Et CH₂OCH₂CE ≡CH Ms H Et Me Et CH₂OCH₂C1 Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOEt Ms H Et Me Et CH₂CH₂OMe Ms H Et Me Et CH₂CH₂OEt Ms H Et Me Et CH€tOH Ms H Et Me Et CHEtOH Ms H Et Me Et CHETOME Ms H Et Me Et CHETOME Ms H Et Me Et CH€TOME Ms H Et Me Et CH₂CH₂OHe Ms H Et Me Et CH₂CH₂CH₂OMe Ms H Et Me Et CH₂CH₂CH₂OMe Ms H Et Me Et CH₂CH₂CH₂CH Ms H Et Me Et CH₂CCH₂CH Ms H Et Me Et CH₂CCH₂CH Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CO₂He Ms H Et Me Et CH₂CO₂He Ms H		Et	Иe			Ms	H
Et Me Et CH₂OCH₂CE ≡CH Ms H Et Me Et CH₂OCH₂C1 Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOEt Ms H Et Me Et CH₂CH₂OMe Ms H Et Me Et CH₂CH₂OEt Ms H Et Me Et CH€tOH Ms H Et Me Et CHEtOH Ms H Et Me Et CHETOME Ms H Et Me Et CHETOME Ms H Et Me Et CH€TOME Ms H Et Me Et CH₂CH₂OHe Ms H Et Me Et CH₂CH₂CH₂OMe Ms H Et Me Et CH₂CH₂CH₂OMe Ms H Et Me Et CH₂CH₂CH₂CH Ms H Et Me Et CH₂CCH₂CH Ms H Et Me Et CH₂CCH₂CH Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CO₂He Ms H Et Me Et CH₂CO₂He Ms H		Et			CH ₂ OPr-n		H
Et Me Et CH₂OCH₂CE ≡CH Ms H Et Me Et CH₂OCH₂C1 Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOEt Ms H Et Me Et CH₂CH₂OMe Ms H Et Me Et CH₂CH₂OEt Ms H Et Me Et CH€tOH Ms H Et Me Et CHEtOH Ms H Et Me Et CHETOME Ms H Et Me Et CHETOME Ms H Et Me Et CH€TOME Ms H Et Me Et CH₂CH₂OHe Ms H Et Me Et CH₂CH₂CH₂OMe Ms H Et Me Et CH₂CH₂CH₂OMe Ms H Et Me Et CH₂CH₂CH₂CH Ms H Et Me Et CH₂CCH₂CH Ms H Et Me Et CH₂CCH₂CH Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CCH₂CO₂He Ms H Et Me Et CH₂CO₂He Ms H Et Me Et CH₂CO₂He Ms H	20						H
Et Me Et CH₂OCH₂C ≡ CH Ms H Et Me Et CH₂OCH₂C1 Ms H Et Me Et CHMeOH Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe Ms H Et Me Et CH2CH₂OMe Ms H Et Me Et CH2CH₂OHe Ms H Et Me Et CH2CH₂OEt Ms H Et Me Et CHEOME Ms H Et Me Et CHEOME Ms H Et Me Et CH2CH₂OEt Ms H Et Me Et CH2CH₂OHe Ms H Et Me Et CH2OCH₂CH₂OMe Ms H Et Me Et CH2OCH₂CH₂OMe Ms H Et Me Et CH2OCH₂CH₂OMe Ms H Et Me Et CH2OCH₂CH₂OMe Ms H Et Me Et CH2OCH₂CH₂OMe Ms H Et Me Et CH2OCH₂CO₂Me Ms H Et Me Et CH2OCHACO₂Me Ms H Et Me Et CH2OO₂Me Ms H		Et ·	Мe	Εż		Мs	H
Et Me Et CH2OCH2CH2CI MS H Et Me Et CHMeOMe MS H Et Me Et CHMeOMe MS H Et Me Et CHMeOMe MS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOEt MS H Et Me Et CHMeOEt MS H Et Me Et CHMeOEt MS H Et Me Et CH2CH2OMe MS H Et Me Et CH2CH2OMe MS H Et Me Et CHEOME MS H Et Me Et CH2OCH2CH2OME MS H Et Me Et CH2OCH2CO2ME MS H Et Me Et CH2OCMECO2ME MS H Et Me Et CH2SEt MS H Et Me Et CH2SO2ME MS H Et Me Et CH2SO2ME MS H							H
Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe C1 H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOEt Ms H Et Me Et CHMeOEt Ms H Et Me Et CHMeOEt Ms H Et Me Et CHMEOEt Ms H Et Me Et CHMEOEt Ms H Et Me Et CHMEOEt Ms H Et Me Et CHMEOEt Ms H Et Me Et CHMEOEt Ms H Et Me Et CHMEOET MS H Et Me Et CHMEOET MS H Et Me Et CHMEOET MS H Et Me Et CHMOOET MS H Et Me Et CHMOOTME MS H Et Me Et CHMOOTME MS H Et Me Et CHMOOTME MS H Et Me Et CHMOOTMEOOME MS H Et Me Et CHMOOTME MS H							H
Et Me Et CHMeOMe Ms H Et Me Et CHMeOMe C1 H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOEt Ms H Et Me Et CHMeOEt Ms H Et Me Et CHMeOEt Ms H Et Me Et CHCCH2OMe Ms H Et Me Et CHCCH2OMe Ms H Et Me Et CHEOME Ms H Et Me Et CHCOCH2CH2OME Ms H Et Me Et CH2OCH2CH2OME Ms H Et Me Et CH2OCH2CH2OME Ms H Et Me Et CH2OCH2CH2OME Ms H Et Me Et CH2OCH2CO2ME MS H Et Me Et CH2CH2CO2ME MS H Et Me Et CH2CHMECO2ME MS H Et Me Et CH2CHMECO2ME MS H Et Me Et CH2CHMECO2ME MS H Et Me Et CH2SO2ME MS H							H
Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeS H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMeOMe MeSO H Et Me Et CHMEOME MS H Et Me Et CHMEOME MS H Et Me Et CHMEOME MS H Et Me Et CHMEOME MS H Et Me Et CHEOME MS H Et Me Et CHEOME MS H Et Me Et CHEOME MS H Et Me Et CHMEOME MS H Et Me Et CHMOOME MS H ET MMOOME MMS H ET ME ET CHMOOME MS H ET MMOOME MMS H	25						H .
Et Me Et CHMeOMe MeSO H Et Me Et CHMeOEt Ms H Et Me Et CHMeOEt Ms H Et Me Et CH2CH2OMe Ms H Et Me Et CH2CH2OEt Ms H Et Me Et CH2CH2OEt Ms H Et Me Et CHEOH Ms H Et Me Et CHEOH Ms H Et Me Et CHEOH Ms H Et Me Et CHEOEt Ms H Et Me Et CH2OCH2OHe Ms H Et Me Et CH2OCH2OHe Ms H Et Me Et CH2OCH2OHe Ms H Et Me Et CH2OCH2OHe Ms H Et Me Et CH2OCH2OHe Ms H Et Me Et CH2OCH2OHe Ms H Et Me Et CH2OCH2OH Ms H Et Me Et CH2OCH2CO2He Ms H Et Me Et CH2OCH2CO2He Ms H Et Me Et CH2OCH2CO2He Ms H Et Me Et CH2OCH2CO2He Ms H Et Me Et CH2OCH2CO2He Ms H Et Me Et CH2CHMeCO2He Ms H							H
Et Me Et CHAOME MeSO H Et Me Et CHMeOEt Ms H Et Me Et CH2CH2OME Ms H Et Me Et CH2CH2OEt Ms H Et Me Et CH2CH2OEt Ms H Et Me Et CHEOME Ms H Et Me Et CHEOME Ms H Et Me Et CHEOME Ms H Et Me Et CHEOME Ms H Et Me Et CH2OCH2CH2OME Ms H Et Me Et CH2OCH2CO2ME Ms H Et Me Et CH2SEt Ms H Et Me Et CH2SEt Ms H Et Me Et CH2SO2EEt Ms H							H -
### But CH CH CH CH CH CH CH C							H
Et Me Et CH2CH2OMe Ms H Et Me Et CH2CH2OEt Ms H Et Me Et CHEtOH Ms H Et Me Et CHEtOH Ms H Et Me Et CHEtOMe Ms H Et Me Et CHEtOMe Ms H Et Me Et CH2OCH2CH2OMe Ms H Et Me Et CH2OCH2CO2Me Ms H Et Me Et CH2OCM2CO2Me Ms H Et Me Et CH2OCM2CO2Me Ms H Et Me Et CH2OCM2CO2Me Ms H Et Me Et CH2CN Ms H Et Me Et CH2SEt Ms H 45 Et Me Et CH2SEt Ms H Et Me Et CH2SO2Me Ms H	30						H
Et Me Et CHzOHzOEt Ms H Et Me Et CHEtOH Ms H Et Me Et CHEtOMe Ms H Et Me Et CHEtOEt Ms H Et Me Et CHzOCHzOMe Ms H Et Me Et CHzOCHzOMe Ms H Et Me Et CHzOCHzOMe Ms H Et Me Et CHzOCHzOMe Ms H Et Me Et CHzOCHzODH Ms H Et Me Et CHzOCHzODH Ms H Et Me Et CHzOCHzCOzMe Ms H Et Me Et CHzOCHzCOzMe Ms H Et Me Et CHzOCMeCOzMe Ms H Et Me Et CHzOCMeCOzMe Ms H Et Me Et CHzOCMeCOzMe Ms H Et Me Et CHzSOzMe Ms H 45 Et Me Et CHzSEt Ms H Et Me Et CHzSEt Ms H		Et	Me			Ms	H
Et Me Et CHEtOH Ms H Et Me Et CHEtOMe Ms H Et Me Et CHEtOMe Ms H Et Me Et CHEtOEt Ms H Et Me Et CH2OCH2CH2OMe Ms H Et Me Et CH2OCH2CH2OMe Ms H Et Me Et CH2OCH2CH2OMe Ms H Et Me Et CH2OCH2CO2Me Ms H Et Me Et CH2OCH2CO2Me Ms H Et Me Et CH2OCH2CO2Me Ms H Et Me Et CH2OCHMeCO2Me Ms H Et Me Et CH2OCHMeCO2Me Ms H Et Me Et CH2CM Ms H Et Me Et CH2SEt Ms H 45 Et Me Et CH2SEt Ms H Et Me Et CH2SO2Me Ms H		Et					Н .
Et Me Et CHEtOMe Ms H Et Me Et CHEtOEt Ms H Et Me Et CH2OCH2CH2OMe Ms H Et Me Et CH2NMez Ms H Et Me Et CH2OCH2Ph Ms H Et Me Et CH2OCH2CO2Me Ms H Et Me Et CH2OCH2CO2Me Ms H Et Me Et CH2OCH2CO2Me Ms H Et Me Et CH2OCM2CO2Et Ms H Et Me Et CH2OCM4CO2Me Ms H Et Me Et CH2CM Ms H Et Me Et CH2CM Ms H Et Me Et CH2CM Ms H Et Me Et CH2SEt Ms H Et Me Et CH2SEt Ms H		Et	Me			Ms	H
Et Me Et CH2OCH2CH2OMe Ms H Et Me Et CH2OCH2Ph Ms H Et Me Et CH2OCH2Ph Ms H Et Me Et CH2OCH2CO2Me Ms H Et Me Et CH2OCH2CO2Me Ms H Et Me Et CH2OCH2CO2Me Ms H Et Me Et CH2CCMECO2Me Ms H Et Me Et CH2CCM Ms H Et Me Et CH2CM Ms H		Et	Мe			Ms	H
Et Me Et CH2OCH2CH2OMe Ms H Et Me Et CH2OCH2Ph Ms H Et Me Et CH2OCH2Ph Ms H Et Me Et CH2OCH2CO2Me Ms H Et Me Et CH2OCH2CO2Me Ms H Et Me Et CH2OCH2CO2Me Ms H Et Me Et CH2CCMECO2Me Ms H Et Me Et CH2CCM Ms H Et Me Et CH2CM Ms H	35		Me	Eż	CHE tOE t	Ms	H
Et Me Et CHzOCHzCOzEt Ms H Et Me Et CHzOCHMeCOzMe Ms H Et Me Et CHzCN Ms H Et Me Et CHzSMe Ms H Et Me Et CHzSMe Ms H Et Me Et CHzSEt Ms H Et Me Et CHzSEt Ms H Et Me Et CHzSOzMe Ms H		Et			CH ₂ OCH ₂ CH ₂ OMe		H
Et Me Et CHzOCHzCOzEt Ms H Et Me Et CHzOCHMeCOzMe Ms H Et Me Et CHzCN Ms H Et Me Et CHzSMe Ms H Et Me Et CHzSMe Ms H Et Me Et CHzSEt Ms H Et Me Et CHzSEt Ms H Et Me Et CHzSOzMe Ms H			Мe	Εŧ	CH _z NMe _z	aK.	H .
Et Me Et CHzOCHzCOzEt Ms H Et Me Et CHzOCHMeCOzMe Ms H Et Me Et CHzCN Ms H Et Me Et CHzSMe Ms H Et Me Et CHzSMe Ms H Et Me Et CHzSEt Ms H Et Me Et CHzSEt Ms H Et Me Et CHzSOzMe Ms H			Me ·			Ms	. Н -
Et Me Et CH2OCH2CO2Et Ms H Et Me Et CH2OCHMeCO2Me Ms H Et Me Et CH2CN Ms H Et Me Et CH2SMe Ms H 45 Et Me Et CH2SEt Ms H Et Me Et CH2SEt Ms H Et Me Et CH2SO2Me Ms H	40		Me		CH ₂ OCH ₂ CO ₂ Me	Ms	H
Et Me Et $CH_2OCHMeCO_2Me$ Ms H Et Me Et CH_2CN Ms H Et Me Et CH_2SMe Ms H 45 Et Me Et CH_2SEt Ms H Et Me Et CH_2SEt Ms H Et Me Et CH_2SO_2Me Ms H	40		Жe			Ms	H
Et Me Et CH2CN Ms H Et Me Et CH2SMe Ms H 45 Et Me Et CH2SEt Ms H Et Me Et CH2SO2Me Ms H Et Me Et CH2SO2Et Ms H		Et	Me			Жs	H
Et Me Et CH_2SMe Ms H 45 Et Me Et CH_2SEt Ms H Et Me Et CH_2SO_2Me Ms H Et Me Et CH_2SO_2Et Ms H		Et				Жs	H
45 Et Me Et CH_2SEt Ms H Et Me Et CH_2SO_2Me Ms H Et Me Et CH_2SO_2Et Ms H		Εt				zĭi	H ·
Et Me Et CH_zSO_zMe Ms H Et Me Et CH_zSO_zEt Ms H	45	Ēt				Ms	H
Et : Me Et - CH2SOzEt Ms H		Et				Ms	H ·
		Et	Me	Et -	CH _z SO _z Et		H
Et Me Et CH2SCH2CH2OMe Ms H							H

	. 7	5	X	Y	Z	Ç,
5	Et	йe	Εt	CH ₂ OCOMe	Ms	H
		Me	Et	CHMe0C0Me	Иs	H H H
	Et Et	Иe	Et	CH ₂ OSO ₂ He	Мs	Ĥ
			Et	CHMeOSO2Me	Иs	Ħ
10	Et n- :	Me		CH ² OH	Ns	Ĥ
	Pr-i	Ме	. Et		Ms	Ħ ·
	Pr-i	Ме	Et	CH ₂ OMe	C1	Ħ
	Pr-i	Me	Et	CH ₂ OMe	MeS	H
	Pr-i	Ме	Et	CH ₂ OMe	MeSO	
15	Pr-i	Нe	Et	CH ₂ OMe		17
	Pr-i	Мe	Et	CH _z OE t	Ms	<u> </u>
	Pr-i	Me	Et	CH ₂ 0Et	CI G	Π Π
	Pr-i	Ие	Et	CH ₂ OE:	MeS	Π
	Pr-i	Ме	Et	CH ₂ OE t	MeS0	п
20	Pr-i	Ме	Εt	CHzOPr-i	Ms	<u>n</u>
	P r -i	Йe	Εt	CH ₂ OPr-n	Мs	Ħ
	Pr-i	Мe	Et	CH ₂ OCH = CH ₂	Ms	H
	Pr-i	Мe	Et	$CH_zOCH_zCH = CH_z$	Ms	H
	Pr-i	Ме	Et	CH ₂ OCH ₂ C ≡CH	Ms	H
25	Pr-i	Мe	Et	CH2OCH2CH2C1	Ms	<u>H</u> .
	Pr-i	Ме	Et	CHMeOH	Ms	нннининниннинниннинниннинн
	Pr-i	Me	Et	CHMeOHe ·	Мs	H
	Pr-i	Мe	Εċ	CHMeOMe	C1	H
30	Pr-i	Йe	Et Et	CHMeOMe	МеS	H
30	Pr-i	Ме	Et	CHMeOMe	MeS0	H
	Pr-i	Ме	Et	CHMeOEt	Ms .	. Н
	Pr-i	Ме	Εt	CH _z CH _z OMe	Ms	H
	P - -i	Ме	Et	CH ₂ CH ₂ OE t	гM	H
35	Pr-i	Мe	Et	CHE tOH	zK	Н
	P . - i	Йe	Et	CHE tOMe	zĸ	H
	Pr-i	Ме	Et	CHE tOE t	Мs	H
	Pr-i	. Me	Et	CH ₂ OCH ₂ CH ₂ OMe	Мs	H
	Pr-i	Мe	Et	CHzNMez	Ms	H
40	P r -i	Ме .	Et	CH2OCH2Ph	Ms	Н
	Pr-i	Ме	Ēt	CH _z OCH _z CO _z He	Ms	. H
	Pr-i	Ме	Et	CH20CH2CO2Et	Жs	H
	Pr-i	Me	Et	CH = OCHMeCO = Me	Ms	Н
	Pr-i	· Me	F÷	CH ₂ CN	гĸ	H H H H
45	Pr-i	Me	Et Et	CH _z SMe	zľs.	H
	Pr-i	Ме	. Et	CH _z SEt	Ms	H
	Proi	Me	Et	CH ₂ SO ₂ Me	Ms	H
	FF-1 ———————————————————————————————————	rie	C L	OH 200 SING		

0 282 944

A	E	X	Y	Z	Ġ.
Pr-i	Йe	Εŧ	CH ₂ SO ₂ Et	Иs	Н
Pr-i	Иe	Εt	CH _z SCH _z CH _z OMe	ZK	H
Pr-i	Иe	Εt	CH ₂ OCOMe	Ms	H
Pr-i	Мe	Et	CHMeOCOMe	Ms	H
Pr-i	Нe	Et	CH ₂ OSO ₂ Me	Ms	H
Pr-i	Me	Et	CHMeOSO zMe	Ms	H

	A	В	X	Y	Z	G.
5	$\overline{CH_2CH} = CH_2$	H	Мe	CH = OH	Ms	H
	$CH_2CH = CH_2$	Ħ	Мe	CH ₂ OMe	Ms	H
	$CH_2CH = CH_2$	Ħ	Мe	CH ₂ OMe	C1	H H
	$CH_2CH = CH_2$	H	Ме	CH ₂ OMe	MeS	H
10	$CH_2CH = CH_2$	Ħ	Ме	CH ₂ OMe	MeSO	H
	$CH_2CH = CH_2$	Ħ	Мe	CH=0Et	Ms	H
	$CH_{c}CH = CH_{c}$	H	Йe	CH ₂ OE t	Cl	H H
	$CH_zCH = CH_z$	Ħ	Йe	CH ₂ OE t	MeS	H
	$CH_2CH = CH_2$	H	Ме	CH ₂ 0Et	MeS0	H H
15	$CH_2CH = CH_2$	Ħ	Ме	CH ₂ OP _T -i	Ms	H
	$CH_2CH = CH_2$	Ħ	Жe	CH ₂ OPr-n	žis.	H
	$CH_2CH = CH_2$	Ħ	Ме	CH ₂ OCH = CH ₂	Ms	H H
	$CH_2CH = CH_2$	H	Ме	CH ₂ OCH ₂ CH=CH ₂	Ms	H
	$CH_zCH = CH_z$	Ħ	Ме	CH ₂ OCH ₂ CH = CH	ZK	Ħ
20	$CH_2CH = CH_2$	Ĥ	Хe	CH 20CH 2CH 2C1	Ms	Ħ
	$CH_2CH = CH_2$	Ħ	Ме	CHMeOH	Ms	Ħ
	$CH_2CH = CH_2$	H	Иe	CHMeOMe	Ms	H H H
	$CH_2CH = CH_2$	H	Ме	CHMe0Me	ČI	Ħ
25	$CH_2CH = CH_2$	H	Ие	CHMeONe	MeS	Ĥ
25	$CH_2CH = CH_2$	H	ne Me	CHMeOMe	MeSO	H
	$CH_2CH = CH_2$	H	Ме	CHMeOE t	Ms	Ħ
	$CH_zCH = CH_z$	H	Ме	CHIECUS = CH ₂	iis en	Ħ
	$CH_zCH = CH_z$	H	Ме	CHMeOCH = CH ₂	ZK ZK	H H H
30	$CH_2CH = CH_2$	Ħ	. Me	CHMeOCH _z CH = CH _z	Ms	Ĥ
	$CH_2CH = CH_2$	H	. He Me	CHMeOCH ₂ C≡CH	Ns	ਸ਼ੌ
	$CH_2CH = CH_2$	H	rie Me	CHMeOCH ₂ CH ₂ CI	Ms	H
		H	Me	CMe ₂ OH	Ms	H
	$CH_2CH = CH_2$ $CH_2CH = CH_2$	n H	ne Ме	CMezOMe	ar SK	Ĥ
35	$CH_2CH = CH_2$	H	Me	CMezOE:	. Ms	ਸ਼ੌ
	$CH_2CH = CH_2$	Ħ	ne Me	CH ₂ CH ₂ OMe	. cn 2K	Ĥ
	$CH_2CH = CH_2$	H	ne Me	CH ₂ CH ₂ OE t	en en	н н н н н
	$CH_2CH = CH_2$	H	ne Me	CHE tOH	en em	Ä
40		Н	Me	CHE tOMe	Ms	ਸ਼ੌ
40	$CH_zCH = CH_z$	n H		CHE to Et	ZK ZK	Ä
	$CH_2CH = CH_2$		Ме	CH ₂ OCH ₂ CH ₂ OHe	Ms	H
	$CH_2CH = CH_2$	Н	Ме	CHMeOCH ₂ CH ₂ OMe	Ms 2K	H
	$CH_{2}CH = CH_{2}$	H	Ме	CH 24Me 2	zří	Ħ
45	$CH_{z}CH = CH_{z}$	H	Ме .	CHMeNMe _z	Ms	H H
	$CH_2CH = CH_2$	H	ile Mo	Chrienne: CH zCH zNMe:	Ms	Ħ
	CH CH = CH 2	H	ite Me	CH ₂ OCH ₂ Ph	en ZK	Ħ
	$CH_2CH = CH_2$	H	Иe	CUSOUISLII	119	

						•
_	A	В	X	Y	Z	Ç,
5	$CH_2CH = CH_2$	H	Йe	C∺MeOCH₂Ph	Ms	Н
	$CH_2CH = CH_2$	H	Йe	CH2OCH2CO2Me	Жs	Ħ
	$CH_2CH = CH_2$	H	Мe	CH2OCH2CO2Et	Ms	H
	$CH_2CH = CH_2$	H	Ме	CH 20CHMeCO 2Me	Ms	Ä
10	$CH_2CH = CH_2$	H	Мe	CH ₂ CN	Ms ·	H ·
	CH _z CH=CH _z	H	Йe	CH₂SMe	Ms	Ħ
	CH _z CH=CH _z	Ĥ	Йe	CH ₂ SEt	Ms	
	$CH_2CH = CH_2$	H	Me	CH _z SOMe	Ms	H H H H
	$CH_2CH = CH_2$	H	Me	CH 2SO 2Me	Ms .	ਸੌ
15	$CH_2CH = CH_2$	Ħ	Ме	CH _z SO _z Et	Ms	Ĥ
	CH ₂ CH=CH ₂	Ĥ	Йe	CHMeSMe	ž. Ž	ਸ਼
	CH ₂ CH=CH ₂	H	Иe	CHMeSO _z Me	Ms	ਸ਼ੌ
	$CH_2CH = CH_2$	H	Ме	CH ₂ SCH ₂ CH ₂ OMe	Ms .	Ħ
20	$CH_zCH = CH_z$	Ħ	Ме	CH ₂ OCOMe	. Ms	Ħ
	$CH_2CH = CH_2$	Ħ	Me	CHMe0C0Me	Ms	H H H
	$CH_2CH = CH_2$	Ħ	Иe	CH ₂ OSO ₂ Me	Ms	H
	CH ₂ CH=CH ₂	Ĥ	Ме	CHMeOSO _z Me	Ms	Ħ
	CH ₂ C ≡CH	Ħ	Иe	CH ₂ OH	· · · · · · · Ms · · · · · · · ·	H
25	CH ₂ C ≡ CH	H	Иe	CH ₂ OMe	Ms	H
	CH ₂ C ≡ CH	H	Me	CH ₂ OMe	CI	H
	CH ₂ C ≡CH	H	Иe	CH ₂ OMe	MeS	Ħ
	CH ₂ C ≡CH	H	Иe	CH ₂ OMe	MeSO	H
	CH ₂ C ≡CH	H	. Me	CH ₂ OEt	Ms	H
30	CH ₂ C ≡ CH	H	. He	CH ₂ OEt	CI	H
	CH ₂ C ≡CH	H	Ме	CH _z OE t	MeS .	H
	CH ₂ C ≡ CH	H	йе	CH ₂ OE t	MeSO	H
	CH ₂ C ≡ CH	H	Ме	CH ₂ OPr-i	Ms	H
35	$CH_2C = CH$	H	Ме	CH ₂ OPr-n	Ms	H
55	CH ₂ C ≡CH	H	Ме	$CH_2OCH = CH_2$	ns Ns	H
	CH ₂ C ≡ CH	H	Ме	$CH_2OCH_2CH = CH_2$	is is	H
	CH ₂ C ≡ CH	Ħ	йe	CH ₂ OCH ₂ C ≡ CH	ns Ns	H
	CH ₂ C ≡CH	H	ne Ne	CH ₂ OCH ₂ CH ₂ Cl	ns Ns	H
40	CH ₂ C ≡CH	H	ne Me	CHMeOH	en Zm	H
	CH ₂ C = CH	H	ne Me	CHMeOMe	Ms 11s	H
	CH ₂ C ≡ CH					
	CH ₂ C ≡CH	H	йe Мо	CHMeOMe	CI MeS	H H
	CH ₂ C ≡CH '	H H	Ме	CHMeOMe		H
45	CH ₂ C ≡ CH		Ме	CHMeOMe CHMeOEt	MeSO	n n
	CH ₂ C ≡ CH	H H	Ме	CHMeOCH = CH ₂	Ms Vo	H H
	CH ₂ C ≡CH	n H	Me Ma	CHMeOCH = CH ₂	Ms Ms	H
	Olizo — Cil	Π	Me 	Curiencu — Cus	112	14

	A	В	Х	Y	Z	ę,
5	CH₂C ≡CH	H	Иe	CHMeOCHzCH = CHz	Ms	H
	CH ₂ C ≡CH	Ħ	Жe	$CHMeOCH_2C = CH$	Ms	Ħ
	CH₂C ≡CH	Ĥ	Йe	CHMeOCH ₂ CH ₂ Cl	Мs	Ħ
	CH ₂ C ≡ CH	H	Мe	CMe _z OH	Ms	H H H
10	CH ₂ C ≡CH	H	Йe	CMe = OMe	Ms	Ħ
	CH ₂ C ≡CH	H	Me	CMe=OEt	zK	Ħ
	CH₂C ≡CH	Ħ	Иe	CH _z CH _z OMe	Ms	нининин
	CH ₂ C ≡CH	H	Ме	CH ₂ CH ₂ OEt	Ms	Ħ
	CH ₂ C ≡CH	Ĥ	Йe	CHE ±OH	Ms	ਸੌ
15	CH ₂ C ≡CH	H	Ме	CHE tOMe	Ms	Ĥ -
	CH ₂ C ≡ CH	H	Йe	CHE tOE t	Ms	Ħ
	CH ₂ C ≡CH	Ħ	Йe	CH 20CH 2CH 20Me	Ms	Ĥ
	CH ₂ C ≡CH	Ĥ	Ме	CHMeOCH 2CH 2OMe	Мs	Ħ
	CH ₂ C ≡CH	Ħ	Ме	CHzilMez	Ms	Ħ
20	CH _z C ≡CH	Ħ	Мe	CHMeNMe _z	Ms	Ĥ
	CH ₂ C ≡ CH	Ħ	Иe	CH ₂ CH ₂ NMe ₂	Ms	Ħ.
	CH ₂ C ≡CH	H	Иe	CH ₂ OCH ₂ Ph	Ms.	Ħ
	CH ₂ C ≡ CH	Ħ	Me	CHMeOCH ₂ Ph	Ms	Ħ
25	CH _z C ≡CH	Ĥ	Me	CHzOCHzCOzMe	Ms	Ħ,
	CH _z C ≡CH	Ħ	Me	CH ₂ OCH ₂ CO ₂ E t	Ms	Ħ
	CH ₂ C ≡CH	Ĥ	Ме	CH20CHMeCO2Me	Ms	Ħ
	CH ₂ C ≡CH	H	Ме	CH ₂ CN	Ms	H
	CH ₂ C ≡CH	Ĥ	. Me	CH _z SMe	ZK	Ĥ
30	CH ₂ C ≡CH	Ħ	Me	CH ₂ SEt	Ms	H
	CH₂C ≡CH	H	Ме	CH ₂ SOMe	Ms	Ä
	CH ₂ C ≡CH	H	Me	CH ₂ SO ₂ Me	ils	Ĥ
	CH ₂ C ≡CH	Ħ	Мe	CH ₂ SO ₂ Et	Ms	\overline{H}
	CH₂C ≡CH	Ħ	Мe	CHMeSMe	Ms	H
35	CH₂C ≡CH	Ĥ	Ме	CHMeSO =Me	Ms	Ĥ
	CH₂C ≡CH	H	Мe	CH _z SCH _z CH _z OMe	Ms	H
	CH'≥C ≡CH	H	Мe	CH ₂ OCOMe	Ms	H
	CH ₂ C ≡CH	Ĥ	Мe	CHMeOCOMe	ZK	H .
40	CH _c C ≡CH	Ĥ	Мe	CH _z OSO _{zM} e	Жs	H
	CH₂C ≡CH	Ĥ	Ме	CHMeOSOzMe	.Hs	H
	$CH_2CH = CH_2$	H	C1	CH=OH	Ms	Н
	$CH_2CH = CH_2$	H	C1	CH 20Me	Ms	H
	$CH_2CH = CH_2$	H	ČĪ	CH₂0Me	CI	H
45	$CH_2CH = CH_2$		Ci	CH=0Me	MeS	H
	$CH_2CH = CH_2$	Ħ	či	CH _z OMe	MeS0	H
	CH ₂ CH=CH ₂	H	či	CH _z OEt	Ms	H
			- •			

	A.	E	₹*	37		
5		ند	X	<u>Y</u>	Z	Q
3	$CH_2CH = CH_2$	H	Cl	CH ₂ 0Et	Cl	H
	$CH_zCH = CH_z$	H	Cl	CH ₂ OE t	MeS	H
	$CH_2CH = CH_2$	H	CI	CH ₂ OE t	MeSO	H
	$CH_2CH = CH_2$	H	C1	CH ₂ OPr-i	iis	H
10	$CH_zCH = CH_z$	H	Cl	CH ₂ OPr-n	Ms	H
	$CH_2CH = CH_2$	Ħ	C1	CH ₂ OCH = CH ₂	Ms	H
	$CH = CH = CH_z$	H	CI	$CH_2OCH_2CH = CH_2$	Ms	. II
	$CH_zCH = CH_z$	H	CI	$CH_2OCH_2C \equiv CH$	Ms	H
	$CH_2CH = CH_2$	H	CI	CH ₂ OCH ₂ CH ₂ C1	en 2K	H
15	$CH_2CH = CH_2$	H	C1	CHMeOH	iis S	H
	$CH_2CH = CH_2$	Ħ	ĞÎ	СНИеОМе	Ms 2M	H
	$CH_zCH = CH_z$	H	C1	CHMeOMe	CI	n u
	$CH_2CH = CH_2$	H	ČĪ	CHMeOMe	MeS	Ω U
00	CH ₂ CH=CH ₂	Ħ	ČĪ	CHMeOMe	MeSO	H H H
20	$CH_2CH = CH_2$	Ĥ	Ci	CHMeOEt		П . U
	$CH_2CH = CH_2$	Ĥ	CI	CHMeOCH = CH ₂	Ms V-	<u>п</u>
	$CH_2CH = CH_2$	H	C1	$CHMeOCH = CH_2$	Ms W-	H
	$CH_zCH = CH_z$	Ĥ	CI	$CHMeOCH_zCH = CH_z$	Ms Ma	H
25	$CH_zCH = CH_z$	H	CI .	CHMeOCH _z C≡CH	Ms u_	H
	$CH_2CH = CH_2$	H	CI		Ms	Н
	$CH_2CH = CH_2$	H	C1	CHMeOCHzCHzCI CMezOH	Ms Y	H
	$CH_2CH = CH_2$	H	C1		Ms	H
	$CH_2CH = CH_2$	H	CI	CMe ₂ OMe	Ms	H
30	$CH_2CH = CH_2$	H		CMezOEt	Мs	H
	$CH_2CH = CH_2$	H	CI CI	CH ₂ CH ₂ OMe	Мs	H
	$CH_2CH = CH_2$	H		CH ₂ CH ₂ OEt	Мs	H
	$CH_2CH = CH_2$	H	C1	CHE tOH	Ms	H
	$CH_2CH = CH_2$	H	C1	CHE tOMe	Ms	Ħ
35 .	$CH_2CH = CH_2$	H	Cl Cl	CHE tOE t	Жs	H
	$CH_zCH = CH_z$			CH ₂ OCH ₂ CH ₂ OMe	Ms	H.
	$CH_2CH = CH_2$ $CH_2CH = CH_2$	H	Cl	CHMeOCHzCHzOMe	Ms	H
		H	C1	CH zilitle z	lis	Ħ :
40	CH ₂ CH=CH ₂	H	CI	CHMeNMe _z	Ms	H
70	CH ₂ CH = CH ₂	H	. C1	CH 2 CH 2 NMe 2	Мs	H .
	$CH_{z}CH = CH_{z}$	H	C1	CH=OCH=Ph	Мs	H
	CH ₂ CH=CH ₂	H	C1	CHMeOCH₂Ph	Ms .	H
	CH ₂ CH=CH ₂	H	Cl	CH = OCH = CO = Me	Ms	. Н
45	$CH_zCH = CH_z$	H	CI	CH20CH2CO2Et	Ms	H
	$CH_zCH = CH_z$	H	CI	CH 20CHMeCO 2Me	Ms	H H
	CH ₂ CH=,CH ₂	H	C1	CH ≥CN	Ms	H
	$CH_zCH = CH_z$	H	CI	CH _z SMe	Ms	H

5	Δ_	Е	X	Y	Z	Q.
5	CH ₂ CH=CH ₂	H	CI	CH ₂ SE t	ijs .	H
	$CH_zCH = CH_z$	H	CI	CH ₂ SOMe	Ms Ms	H T
	$CH_2CH = CH_2$	H H	CI CI	CH ₂ SO ₂ Me CH ₂ SO ₂ Et	ns Ms	H
10	$CH_zCH = CH_z$ $CH_zCH = CH_z$	H	Cl	CHMeSMe	Ms	H
	$CH_2CH = CH_2$	H	CI	CHMeSO₂Me	Ms	Ħ
	$CH_2CH = CH_2$	H	Cl	CH ₂ SCH ₂ CH ₂ OMe	Ms	Ħ
	CH ₂ CH=CH ₂	Ĥ	CI	CH=OCOMe	ds	Ħ
15	CH ₂ CH=CH ₂	H	CI	CHMe0C0Me	Ms	H H H H
	CH _z CH=CH _z	H	CI	CH ₂ OSO ₂ Me	zK	Ħ
	$CH_2CH = CH_2$	H	C1	CHMe0S0≥He	lls	H
	$CH_2C \equiv CH$	H	C1	CH ₂ OH	, lls	H
	CH _z C ≡ CH	H	C1	CH ₂ OMe	Ms	H
20	CH ₂ C ≡ CH	H	C1	CH ₂ OMe	CI	Н
	CH ₂ C ≡ CH	H	CI	CH 20Me	MeS NeSO	n U
	CH _z C ≡CH CH _z C ≡CH	H H	Cl Cl	CH₂OMe CH₂OEt	Ms	H
	CH ₂ C ≡ CH CH ₂ C ≡ CH	H	Ci	CH ₂ OE ±	Cl	Ħ
25	$CH_2C = CH$	H	CI	CH ₂ OEt	ХeS	Ĥ
	CH ₂ C ≡ CH	Ħ	ČÌ	CH _z OE t	MeSO	ннинниннинниннинн
	CH ₂ C ≡ CH	H	ČÌ	CH ₂ OPr-i	Ms	H
	CH _z C ≡ CH	H	CI	CHzOPr-n	Ms	H
30	CH ₂ C ≡ CH	H	. C1	$CH_2OCH = CH_2$	Иs	H
	CH _z C ≡ CH	H	C1	$CH_2OCH_2CH = CH_2$	Ms	Ħ
	CH₂C ≡CH	H	Cl	CH ₂ OCH ₂ C ≡CH	Ms	H
	CH _z C ≡ CH	H	CI	CH ₂ OCH ₂ CH ₂ C1	aK ak	<u>п</u> .
35	CH ₂ C ≡ CH	H	Cl Cl	СНМеОН СНМеОМе	iis Iis	H H
33	CH ₂ C ≡CH CH ₂ C ≡CH	H H	Cl	Синеоне	Cl	H.
	CH _z C = CH	H	CI	CHMe0Me	MeS	H
	CH ₂ C ≡ CH	Ħ	Čì	CHMe0Me	MeSO	H
	CH _z C ≡ CH	H	ĊĪ	CHMeOE t	Ms	H
40	CH ₂ C ≡ CH	Ĥ	CI	$CHMeOCH = CH_z$	ar.	H
	CH _z C ≡CH	H	Cl	$CHMeOCH = CH_z$	Иs	
	CH₂C ≡CH	H	Cl	CHMeOCH = CH = CH =	Ms -	H
	CH _z C ≡CH	, н	C:	CHMeOCH = C = CH) is	й. и
45	$CH_2C \equiv CH$	H	C1	CHMeOCH zCHzCl	is No	H H H H
	CH ₂ C ≡CH	H	CI	CMezOH	Ms Ms	П Н.
	CH ₂ C ≡CH	H	C1	CMe = OMe CMe = OEt	ns Ms	H
	CH _z C ≡ CH	H	C1	O'IC SOFF		

	A	Ε	X	Y	Z	କ୍ଷ
	CH ₂ C ≡ CH	Н	C1	CH ₂ CH ₂ OMe	Нs	H
5	CH ₂ C ≡ CH	H	CI	CH _z CH _z OE t	Ms	H
	CH _z C ≡CH	H	C1	CHE tOH	Ms	Ħ
	$CH_2C \equiv CH$ $CH_2C \equiv CH$	H	C1	CHEtOMe	Ms	H H H
	CH ₂ C ≡ CH	H H	CI CI	CHE tOE t	Ms ·	H
10	CH ₂ C ≡ CH	H	CI CI	CH ₂ OCH ₂ CH ₂ OMe	Ms	H
	CH ₂ C ≡ CH	H	CI	CHMeOCHzCHzOMe	Йs	H
	CH ₂ C ≡ CH	H	C1	CH2NMe2 CHMeAMe2	Яs	- <u>H</u>
	CH _z C ≡ CH	Ħ	CI	CH ₂ CH ₂ NMe ₂	Ms	H
15	$CH_zC \equiv CH$	Ĥ	CI	CH ₂ OCH ₂ Ph	Ms Ma	H H
	$CH_2C \equiv CH$	Ħ	CÎ	CHMeOCH ₂ Ph	Ms Ms	H
	$CH_2C \equiv CH$	H	CI	CH ₂ OCH ₂ CO ₂ Me	ns Ms	H H
	CH ₂ C ≡CH	H	CI	CH ₂ OCH ₂ CO ₂ Et	en en	n H
20	CH ₂ C ≡ CH	H	Cl	CH ₂ OCHMeCO ₂ Me	Ms	H
	CH ₂ C ≡ CH	H	C1	CH ₂ CN	Ms	Ħ
	CH ₂ C ≡CH	H	CI	CH ₂ SMe	Ms	Ĥ
	CH ₂ C ≡ CH	H	CI	CH ₂ SE t	Ms	H
25	$CH_2C = CH$ $CH_2C = CH$	H	C1	CH _z SOMe	Ms	H H
	CH ₂ C ≡CH	H H	CI CI	CH _z SO _z Me	Ms	H
	CH ₂ C ≡CH	н	Cl Cl	CH ₂ SO ₂ Et	Ms	H
	CH ₂ C ≡CH	H	CI	CHMeSMe	Яs	H
	CH _z C ≡ CH	H	CI	CHMeSOzMe CHzSCHzCHzOMe	Жs	H
30	$CH_2C \equiv CH$	Ĥ	ČĪ	CH ₂ OCOMe	Ms Ms	H
	CH ₂ C ≡CH	H	ĊĨ	CHMe0COMe	ns Ms	H H
	$CH_{z}C \equiv CH$	H	CI	CH ₂ OSO ₂ Me	Ms	п Н
	CH ₂ C ≡ CH	H	CI	CHMeOSOzMe	Ms	H
35	$CH_2CH = CH_2$	H	Me0	CH _z OH	Ms	Ħ
	CH _z CH=CH _z	H	MeO	CH ₂ OMe	Ms	- H
	CH-2CH = CH2	H	MeO	CH₂OMe	CI	H
	CH ₂ CH=CH ₂	H	MeO	CH _z OMe	MeS	H
40	CH ₂ CH=CH ₂	H	MeO	CH ₂ OMe	MeS0	H
	$CH_2CH = CH_2$ $CH_2CH = CH_2$	Н	MeO	CH ₂ OEt	Ms	H
	$CH_2CH = CH_2$	H H	MeO	CH ₂ OEt	Cl	H
	$CH_2CH = CH_2$	H	MeO MeO	CHzOEt CHzOEt	MeS	H H H
45	$CH_2CH = CH_2$	H	neo Me0	CH ₂ OP _r -i	MeS0	H. Tr
	$CH_zCH = CH_z$	Ĥ	MeO	CH ₂ OPr-n	Ms Ms	H H
	$CH_2CH = CH_2$	H	MeO	$CH_2OCH = CH_2$	Ms Ms	n H
				- CH2	112	11

	A	В	X	Y	Z	Q.
	$CH_2CH = CH_2$	H	MeO	CH ₂ OCH ₂ CH=CH ₂	Иs	H
5	$CH_zCH = CH_z$	H	MeO	$CH_zOCH_zC \equiv CH$	Ms	H
	$CH_2CH = CH_2$	H	ИeO	CH2OCH2CH2C1	Ms	H H H H H H H H H H H H
	$CH_zCH = CH_z$	H	CeM	CHMeOH	Ms	H
	$CH_zCH = CH_z$	H	MeO	CHMe0Me	Ms	H
10	$CH_2CH = CH_z$	H	СөМ	CHMe0Me	CI	H
_	$CH_2CH = CH_2$	H	Оем	СНИеОМе	MeS	H
	$CH_zCH = CH_z$	H	MeO	CHMeOMe	MeSO	H
	$CH_2CH = CH_2$	H	MeO	CHMeOE t	aK s	H
	$CH_zCH = CH_z$	H	MeO	CHMeOCH = CH ₂	Ms	H
15	$CH_2CH = CH_2$	H	MeO	$CHMe0CH = CH_2 \qquad .$	Ms	H
	$CH_2CH = CH_2$	H	CeM	$CHMeOCH_zCH = CH_z$	Ms -	
	$CH_2CH = CH_2$	H	MeO	CHMeOCH ₂ C≡CH	Ms	H
	$CH_zCH = CH_z$	H	MeO	CHMeOCH ₂ CH ₂ C1	Ms	H
20	$CH_2CH = CH_2$	H	Сэм	CMezOH	Мs	H
	$CH_zCH = CH_z$	H	МеО	CMe _z 0Me	Ms	H
	$CH_2CH = CH_2$	H	MeO	CMez0Et	Ms	H
	$CH_zCH = CH_z$	H	CeM	CH ₂ CH ₂ OMe	Ms	H H H H H
	$CH_2CH = CH_2$	H	CeM	CH ₂ CH ₂ OEt	Ms	H
25	$CH_zCH = CH_z$	H	СөМ	CHEtOH	Ms	H H H
	$CH_zCH = CH_z$	H	MeO	CHE tOMe	Ms	H
	$CH_zCH = CH_z$	H	CeM	CHE tOE t	Ms	H
	$CH_2CH = CH_2$	H	MeO	CH ₂ OCH ₂ CH ₂ OMe	Ms	H
30	$CH_zCH = CH_z$	H	CeM	CHMeOCH zCH zOMe	Ms	H
	$CH_2CH = CH_2$	H	Me0	CH2NMez	Ms	H
	$CH_2CH = CH_2$	H	MeO	CHMeNMe ₂	Ms	H H H H
	$CH_2CH = CH_2$	H	MeO	CH ₂ CH ₂ NMe ₂	Ms	H
	$CH_zCH = CH_z$	H	CeM	CH2OCH2Ph	Ms	H
35	$CH_2CH = CH_2$	H	MeO	CHMeOCH ₂ Ph	2M	H
	$CH_2CH = CH_2$	H	Me0	CH2OCH2CO2Me	Ms	H
	$CH_zCH = CH_z$	H	MeO	CH _z OCH _z CO _z Et	Мs	H
	$CH_zCH = CH_z$	H	MeO	CH ₂ OCHMeCO ₂ Me	Ms	H
40	$CH_zCH = CH_z$	H	MeO	CH ₂ CN	Ms	H
	$CH_2CH = CH_2$	H	MeO	CH₂SMe	zĸ	H
	$CH_2CH = CH_2$	H	MeO	CH ₂ SE t	Ms	H
	$CH_2CH = CH_2$	H	MeO	CH₂S0Me	Ms	H
	$CH_2CH = CH_2$	H	MeO	CH _z SO _z Me	Ms .	H
45	$CH^{z}CH = CH^{z}$	H	CeM	CH ₂ SO ₂ Et	Иs	H
	$CH_2CH = CH_2$	H	MeO	CHMeSMe	Мs	H
	$\frac{CH_2CH = CH_2}{}$	H	MeO	CHMeSOzMe	Ms .	Н

	<u>A</u>	В	. X	Y	Z	Ç.
5	CH ₂ CH=CH ₂	H	MeO	CH2SCH2CH2OMe	Ms.	Н
3	CH ₂ CH=CH ₂	H	MeO	CH ₂ OCOMe	Ms	H
	CH ₂ CH=CH ₂	H	МеО	CHMe0COMe	Ms	H
	$CH_2CH = CH_2$	H	MeO	CH ₂ OSO ₂ Me	· Ms	H
	CH ₂ CH=CH ₂	H	MeO	CHMeOSO zMe	Ms ·	H
10	$CH_2C \equiv CH$ $CH_2C \equiv CH$	H	MeO	CH ₂ OH	Ms	H
	$CH_2C \equiv CH$	H	MeO	CH ₂ OMe	Ms	Н Н Н Н
	CH ₂ C ≡CH	H	ЖеО	CH₂0Me	_ C1	H
	CH ₂ C ≡CH	H H	MeO	CH ₂ OMe	MeS	
15	CH ₂ C ≡CH	n H	Me0	CH ₂ OMe	MeS0	H
	CH ₂ C ≡CH	H	йеО ¥-О	CH ₂ OEt	Ms	H
	$CH_2C = CH$	H	MeO	CH ₂ OE t	CI_	·H
	CH ₂ C ≡CH	H	CeM VeO	CH ₂ OEt	MeS	H
	CH ₂ C ≡CH	H	neo OeM	CH ₂ OEt	MeSO	- Н
20	CH ₂ C ≡CH	H	neo MeO	CH ₂ OPr-i	Ms	H
	CH ₂ C ≡CH	H	MeO	CH ₂ OPr-n CH ₂ OCH = CH ₂	Ms	H
	CH ₂ C ≡ CH	H	MeO MeO		Ms	H
	CH ₂ C ≡ CH	H	Me0	CH ₂ OCH ₂ CH=CH ₂ CH ₂ OCH ₂ C ≡CH	Ms	H
25	CH ₂ C ≡ CH ·	Ħ	MeO	CH ₂ OCH ₂ CH ₂ CH ₂ CI	Ms V-	H
	CH ₂ C ≡CH	H	MeO	CHMeOH	Ms V-	H
	CH ₂ C ≡ CH	Ħ	MeO	CHMeOMe	Ms. Ms	H
	CH ₂ C ≡CH	H	MeO	CHMeOMe	C1	H
30	CH _z C ≡CH	H	MeO	CHMeOMe	MeS	H H
00	CH ₂ C ≡CH	H	МeO	CHMe0Me	HeSO	H
	CH ₂ C ≡CH	H	MeO	CHMeOEt	Ms	H
	$CH_2C \equiv CH$	H	MeO	CHMeOCH = CH ₂	Ms	H
	$CH_zC \equiv CH$	H	MeO	$CHMeOCH = CH_z$	Ms	H
35	CH ₂ C ≡ CH	H	Me0	CHMeOCH zCH = CHz	Иs	H
	CH _z C ≡ CH	H	MeO	CHMeOCH ₂ C≡CH	Ms	H
	CH 2C ≡CH	H	CeM	CHMeOCH 2CH 2CI	Ms	H
	$CH_zC \equiv CH$	H	MeO	CMe ₂ OH	Ms	Ħ
40	$CH_{z}C \equiv CH$	H	CeM	CMe_OMe	Ms	H
	CH _z C ≡ CH	H	CeM	CMe=OEt	Ms	Ĥ
	CH ₂ C ≡ CH	H	MeO	CH ₂ CH ₂ OMe	Ms	H
	CH ₂ C ≡ CH	H	MeO	CH _z CH _z OE t	zM.	Н
45	CH _z C ≡CH.	H	MeO	CHE tOH	. Ms	Н
45	CH ₂ C ≡ CH	H	MeO	CHE tOMe	zM ·	H
	CH ₂ C ≡ CH	H	MeO	CHEtOEt	Ms	Н
	CH ₂ C ≡ CH	H	MeO	$CH_zOCH_zCH_zOMe$	Ms	H

	A	E	X	Y	Z	Q
5	$H3 \equiv 3_2 H3$	Н	ЖeЭ	CHMeOCH cCH cOMe	Мs	H
	CH ₂ C ≡CH	H	ЙeО	CH ₂ NMe ₂	Ms	H
	CH ₂ C ≡CH	H	MeO	CHMeNMe _z	Ms	H
	$CH_zC \equiv CH$	H	ЖеО	CH ₂ CH ₂ NMe ₂	Ms	нннннннннн
10	$CH_{c}C = CH$	H	ИеО	CH2OCH2Ph	Ms .	H
	CH ₂ C ≡CH	H	CeM	CHMeOCH zPh	Ms	H
	CH ₂ C ≡CH	H	CeK	CHzOCHzCOzMe	Ms	H
	CH _z C ≡ CH	H	MeO	CH=OCH=CO=Et	Жs	H
	CH ₂ C ≡CH	H	rei	CHz0CHMeCOzMe	Жs	H
15	CH ₂ C ≡ CH	H	NeO	CH ₂ CN	Мs	H
	CH₂C ≡CH	H	MeO	CH _z S∦e	Ms	H
	CH ₂ C ≡ CH	H	ИeЭ	CH ₂ SE t	Ms	H
	CH ₂ C ≡CH	H	MeO	CH ₂ SOMe	Ms	H
20	CH ₂ C ≡ CH	H	Me0	CH ₂ SO ₂ Me	Ms	Н.
20	CH ₂ C ≡CH	H	MeO	CH2SO2Et	Иs	H
	$CH_zC \equiv CH$	H	NeO	CHMeSMe	Ms	
	CH ₂ C ≡CH	H	ИеО	CHMeS0 _z Me	Ms	H H H
	CH ₂ C ≡ CH	H	NeO	CH2SCH2CH2OMe	Ms	H
25	CH ₂ C ≡ CH	H	MeO	CH ₂ OCOMe	zk	H
	$CH_2C \equiv CH$	H	ИeO	CHMe0C0Me	Ms	H
	CH ₂ C ≡CH	H	MeO	CH _z OSO _z Me	Ms	H H
	CH ₂ C ≡ CH	H	MeO	CHMeOSO zMe	2K	H

						
5	À	Б	X	Y	Z	Ç,
_	CH ₂ CH=CH ₂	Иe	Нe	CH ₂ OH	Ms	Н
	$CH_2CH = CH_2$	Мe	Ме	CH ₂ OMe	Ms	Ħ
	CH ₂ CH=CH ₂	Мe	Мe	CH ₂ OMe	CI	H H
	CH ₂ CH=CH ₂	Me	Ме	CH ₂ OMe	MeS	Ħ
10	$CH_2CH = CH_2$	Йe	йe	CH ₂ OMe	MeSO	H H
	$CH_2CH = CH_2$	Мe	Ме	CH ₂ OEt	Ms	H
	CH ₂ CH=CH ₂	Мe	Иe	CH ₂ OE t	Cl	H
	$CH_2CH = CH_2$	Me	Иe	CH ₂ OE t	MeS	H II
	$CH_2CH = CH_2$	Me	ие	CH ₂ OE :	MeSO	n n
15	$CH_zCH = CH_z$	Me	Ие	CH ₂ OPr-i	Ms	H H H H
	$CH_2CH = CH_2$	Me	Иe	CH ₂ OPr-n	ns Ms	H .
	$CH_2CH = CH_2$	ne Me	ne Ne	$CH_zOCH = CH_z$	Ms	H
	$CH_2CH = CH_2$			$CH_2OCH_2CH=CH_2$	14	H
20	$CH_2CH = CH_2$	Me	йe Ч-	CH ₂ OCH ₂ C ≡ CH	ns : Ms	n .
	$CH_2CH = CH_2$	Me M-	Ме	CH ₂ OCH ₂ CH ₂ Cl	ns Ys	11
	$CH_2CH = CH_2$	Мe	Ме		ns Ms	H H H
		Me	Ме	CHMeOH CHMeOHe	ns Ms	T.
	CH ₂ CH=CH ₂	Ме	Ме		CI	H
25	CH ₂ CH=CH ₂	Ме	Йe	CHMeOMe		Д U
	CH ₂ CH=CH ₂	Мe	Йe	CHMeOMe	MeS Y-SO	H H
	CH ₂ CH=CH ₂	Ме	Ме	CHMeOMe	MeS0	П U
	CH ₂ CH=CH ₂	Жe	Йe	CHMeOEt	Ms	H
	CH ₂ CH=CH ₂	Ме	Ме	CH ₂ CH ₂ OMe	Ms .	H
30	CH ₂ CH=CH ₂	Мe	. Me	CH ₂ CH ₂ OEt	Ms	H
	CH ₂ CH=CH ₂	Ме	Ме	CHEtOH	Ms	H
	$CH_2CH = CH_2$	Мe	Ме	CHE tOMe	Ms	H
	CH ₂ CH=CH ₂	Мe	Ме	CHEtOEt	Ms	H
35	CH ₂ CH=CH ₂	Йe	Мe	CH2OCH2CH2OMe	Иs	H
33	CH ₂ CH = CH ₂	Мe	Ме	CHzillez	Ms	H
	CH ₂ CH=CH ₂	Йе	Ме	CH ₂ OCH ₂ Ph	Ms	H H H
	$CH_2CH = CH_2$	Мe	де	CH ₂ OCH ₂ CO ₂ Me	Ms	
	$CH_{z}CH = CH_{z}$	Иe	Ме	CH2OCH2CO2Et	Мs	H
40	$CH_{2}CH = CH_{2}$	Иe	Ме	CH = OCHMeCO = Me	Мs	H
	$CH_2CH = CH_2$	Мe	Мe	CH 2CN	žťs.	H
	$CH_2CH = CH_2$	Мe	Ме	CH ₂ SMe	Ms	H
	$CH_2CH = CH_2$	Мe	Иe	CH ₂ SE t	Ms	H
	$CH_zCH = CH_z$		Me	CH ₂ SO ₂ Me	Мs	H
45	$CH_2CH = CH_2$	Мe	Иe	CH2SO2Et	Ms	H ·
	$CH_2CH = CH_2$	Йe	Иe	CH _z SCH _z CH _z OMe	Ms	H
	CH ₂ CH = CH ₂	Мe	Мe	CH ₂ 0C0Me	Ms	<u>H</u> .
	$CH_2CH = CH_2$	Мe	Мe	CHMeOCOMe	Ms	H

A		В	X	Y	Z	Q.
CH ₂ CH	=CH:	Мe	Me	CH zOSO zMe	Мs	Н
	$=CH_z$	Me	Мe	CHMeOSO = Me	2K	Ħ
CH=C		Нe	Me	CH ₂ OH	· Ms	Ħ
CH ₂ C		Me	Йe	CH₂0Me	Ms	Ä
CH ₂ C		Мe	Йe	CH ₂ OMe	Cl	H H H H
CH ₂ C		Йe	Иe	CH=OMe	MeS	Ħ
CH ₂ C		Иe	Йe	CH ₂ OMe	MeSO	Ħ
CHaC		Мe	Йe	CH ₂ OE t	Ms	Ħ
CHaC		Мe	Мe	CH ₂ OE t	CI	H
CH 2C		Ме	Ме	CH ₂ OE t	MeS	Ħ
CH ₂ C		Мe	Мe	CH2OEt	MeSO	Ħ
CH _z C		Me	Иe	CH ₂ OPr-i	Ms	H
CH ₂ C		Me	Иe	CH ₂ OPr-a	Ms	H H H H H H
CH ₂ C		Me	Иe	CH ₂ OCH = CH ₂	Ms	Ħ
CH 2C		Йe	Жe	CH ₂ OCH ₂ CH=CH ₂	Ms	H
CH ₂ C		Мe	Йe	CH ₂ OCH ₂ C ≡ CH	Ms	Ħ
CH ₂ C		Me	· Me	CH2OCH2CH2C1	2K	H
CH ₂ C		Мe	Иe	СНМеОН	Ms	H H
CH ₂ C		Ме	Йe	CHMeOMe	Ms	H
CHzC		Иe	Ме	СНМеЭМе	C1	H
CH2C		Me	Иe	СЯМеОМе	MeS	H
CH ₂ C		lie	Иe	СНМеЭМе	MeS0	H
CH2C		Мe	Йe	CHMeOEt	Ms	H
CH ₂ C		Me	Me	CH ₂ CH ₂ OMe	Ms	H
CH2C		Me ·	Йe	CH ₂ CH ₂ OEt	Ms	H
CH2C		Me	Me	CHE toh	Ms	H
CHzC		Мe	Иe	CHE tOMe	Ms	H
CHZC	=CH	Мe	Мe	CHE tOE t	Ms	H
CH ₂ C	=CH	Me	Иe	CH2OCH2CH2OMe	Ms	H
CH₂C	≡CH	Мe	Me	CH=NMe=	Мs	H
CH2C	=CH	Мe	Ме	CHzOCHzPh	zří	H
CH₂C	≡CH	Мe	Ме	CHzOCHzCOzMe	Яs	H
CH =C	≡CH	Мe	Мe	CHzOCHzCOzEt	zК	H
CH ₂ C	≕CH	Иe	Мe	CH zOCHMeCO zMe	Ms	H
CH₂C	≕ટમ	Мe	Ме	CH zCN	Ms	H
Oz EO	≕Ch	Мe	Me	CH ₂ SMe	Иs	H
CH 2C	=CH	. Me	Ме	CH ₂ SE t	Ms	H
CH₂C	≡СЖ	Me	Мe	CH ₂ SO ₂ Me	Ms	H
CHzC		Йe	Мe	CH _z SO _z Et	Ms	H
CH _z C	≅CH	Me	Мe	$CH_zSCH_zCH_zOMe$	Ms	H

5	A	E	Х	Y	Z	Ç.
5	CH₂C ≡CH	Мe	Не	CH ₂ OCOMe	Ms	H
	CH ₂ C ≡CH	Мe	Мe	CHMeOCOMe	zľs	u u
	CH ₂ C ≡CH	Мe	Мe	CH ₂ OSO ₂ Me	Ms	H H H
	CH₂C ≡CH	Мe	Мe	CHMe0S0 zMe	Ms	n
10	$CH_2CH = CH_2$	Me	Cl	CH ₂ OH	Жs	H
	$CH_zCH = CH_z$	Me	C1	CH _z OMe	Ms	11
	$CH_2CH = CH_2$	Мe	C1	CH ₂ OMe	CI	н н н н н
	$CH_2CH = CH_2$	Мe	CI	CH ₂ OMe	MeS	n n
15	$CH_2CH = CH_2$	Мe	Cl	CH ₂ OMe	MeSO	n n
	$CH_2CH = CH_2$	Me	Cl	CH ₂ OE t	ileso Ils	17
	$CH_2CH = CH_2$	Мe	C1	CH _z OE t	CI	11 11
	CH zCH = CHz	Мe	CI	CH ₂ OE t	MeS	n. ur
	CH ₂ CH=CH ₂	Мe	C1	CH ₂ OE t	MeSO	n 11
20	CH ₂ CH=CH ₂	Мe	CI	CH ₂ OPr-i	Ms	H
	$CH_zCH = CH_z$	Мe	CI	CH=OPT-n	Ms .	H
	CH = CH = CH 2	Мe	CI	$CH_2OCH = CH_2$	Ms	H
	$CH_2CH = CH_2$	Me	CĪ	$CH_zOCH_zCH=CH_z$	Ms	H
	$CH_2CH = CH_2$	Мe	CĪ	$CH_2OCH_2C \equiv CH$	Ms	H
25	CH ₂ CH=CH ₂	Мe	CI	CH2OCH2CH2CI	Ms ····	H
	CH ₂ CH=CH ₂	Мe	CI	СНИеОН	Ms	H
	$CH_2CH = CH_2$	Мe	CI	CHMe0Me	Ms	H
	$CH_zCH = CH_z$	Me	CI	CHMeOMe	CI	H
30	$CH_zCH = CH_z$	Мe	Cl	CHMe0Me	MeS	H
-	$CH_zCH = CH_z$	Мe	C1	CHMe0Me	MeSO	H
	$CH_2CH = CH_2$	Мe	Cl	CHMe0Et	-Ms	H
	$CH_2CH = CH_2$	Мe	C1	CH ₂ CH ₂ OMe	Ms.	H
	CH ₂ CH=CH ₂	Мe	Cl	CH ₂ CH ₂ OEt	Ms	H
35	$CH_2CH = CH_2$	Мe	Cì	CHE tOH	Ms	Ħ
	$CH_zCH = CH_z$	Me	C1	CHE tOMe	Ms	H.
	CH _z CH=CH _z	Me -	Cl	CHE tOE t	ZK ZK	H
	$CH_zCH = CH_z$	Me	CI	CH ₂ OCH ₂ CH ₂ OMe	Ms ·	H
	CH = CH = CH =	Me	C1	CH2NMez	en em	H
40	CH ₂ CH=CH ₂	Мe	C1	CH ₂ OCH ₂ Ph	iis Ms	H
	$CH_2CH = CH_2$	Йe	Ci	CHzOCHzCOzMe	Xs	H
	$CH_2CH = CH_2$	Мe	Cl	CH ₂ OCH ₂ CO ₂ Et	Ms	H
	$CH_zCH = CH_z$	Мe	Ċi	CH2OCHMeCO2Me	Ms	H
45	CH ₂ CH=CH ₂	Me	ČĪ	CH ₂ CN	Ms	H
	CH ₂ CH=CH ₂	Мe	ĊÌ	CH _z SMe	Ms	H
	CH=CH=CHz	Me	. Čl	CH ₂ SEt	Ms .	H
	CH ₂ CH=CH ₂	Me	ĊĬ	CH ₂ SO ₂ Me	Ms .	H
					11-3	14

	A	<u>a</u>	X	Y	Z	Q
5		W_	C1	CH2SO2Et	Ms	Н
	$CH_2CH = CH_2$ $CH_2CH = CH_2$	Me	CI	CH2SCH2CH2OMe	Ms	Ħ
	$CH_{2}CH = CH_{2}$	Me Me	CI	CH ≥0C0Me	Ms	H
	$CH_2CH = CH_2$	ne Me	CI	CHMeOCOMe	Ms	H
10	$CH_2CH = CH_2$	Ме	Čĺ	CH ₂ OSO ₂ Me	Ms	H
	$CH_2CH = CH_2$	Мe	Č1	CHMeOSO ₂ Me	Ms	H
	$CH_2CH = CH_2$	Нe	Ci	CHaOH	2M	H
	CH ₂ C ≡ CH	Me	C1	CH=0Me	2K	H
	$CH_2C = CH$	Мe	ČÌ	CH 20Me	Cl	H
15	HO≡ Oaro	Me	Cī	CH ₂ OMe	MeS	H
	CH ₂ C ≡ CH	Мe	CI	CH ₂ 0Me	MeS0	H
	CH ₂ C ≡ CH	Me	Cl	CH ₂ OE t	Ms	H
	CH ₂ C ≡ CH	Мe	Cl	CH ₂ OE t	Cl	H
20	CH ₂ C ≡CH	Йe	CI	CH _z OE t	NeS	H
	CH ₂ C ≡ CH	Мe	Cl	CH zOE t	MeS0	H
	CH ₂ C ≡ CH	Me	C1	CH _z OP:-i	Ms	H H
	$CH_zC \equiv CH$	Мe	C1	CH _z OPr-a	Ms	H
	CH ₂ C ≡ CH	Мe	C1	CH _z OCH = CH _z	Ms	H
25	CH ₂ C ≡ CH	Мe	C1	$CH_2OCH_2CH = CH_2$	Ms	н Н
	$CH_2C \equiv CH$	Мe	C1	CH ₂ OCH ₂ C ≡ CH	Ms	n H
	$CH_zC = CH$	Мe	C1	CH 20CH 2CH 2Cl	Ms Ma	H
	CH ₂ C ≡ CH	Йe	CI	СНИеОН	Ms Ms	H
30	CH ₂ C ≡ CH	Иe	CI	CHMeOMe	CI	H
	CH ₂ C ≡CH	Мe	Cl	CHMeOMe	MeS	Ħ
	$CH_zC \equiv CH$	Йe	C1	CHMeOMe .	MeSO	H
	CH _z C ≡ CH	Мe	C1	CHMeOMe	Ms 2h	Ħ
	CH ₂ C ≡ CH	Мe	C1	CHMeOEt CH2CH2OMe	Ms	H
35	CH ₂ C ≡ CH	Мe	CI	CH ₂ CH ₂ OEt	Ms.	Ĥ
	HD≡ D₂HD	Мe	Cl Cl	CHE EOH	Ms	H H H H H
	CH ₂ C ≡ CH	Йe	C1	CHE tOMe	aK.	H
	$CH_2C \equiv CH$ $CH_2C \equiv CH$	Me Me	CI	CHE tOE t	Ms	H
40	$CH_2C \equiv CH$ $CH_2C \equiv CH$	ne Me	C1	CH ₂ OCH ₂ CH ₂ OMe	Ms	Ħ
	CH ₂ C ≡ CH	Me	Cl	CH z:NMe z	Ms	
	CH ₂ C ≡ CH	Ме	C1	CH=OCH≥Ph	2K	H
	CH ₂ C ≡ CH	ile Me	Cl	CH = OCH = CO = Me	Ms.	. Н
45	$CH_2C \equiv CH$		Cl	CH2OCH2CO2Et	Ms	H
45	CH ₂ C ≡ CH	Me	· ČÌ	CH 20CHMeCO2Me	Ms	H
	CH ₂ C. = CH	Йe	ĊĨ	CH ₂ CN	Ms	H .
	CH ₂ C ≡ CH	Me	ĊĨ	CH _z SMe	Ms	H .

5	A .	Б	X	Y	Z	Q
•	CH₂C ≡CH	Мe	CI	CH ₂ SEt	Ms	H
	CH₂C ≡CH	Мe	CI	CH _z SO _z Me	Ms	H
	$CH_2C \equiv CH$	Мe	CI	CH ₂ SO ₂ St	Ms	H H H
	$CH_2C \equiv CH$	Мe	C1	CH2SCH2CH2OMe	Ms	H
10	$CH_2C \equiv CH$	Мe	Cl	CH₂0C0He	Ms .	H H H
	$CH_{2}C \equiv CH$	Мe	C1	CHMe0C0Me	Ms	H
	$CH_{z}C \equiv CH$	Мe	Cl	CH ₂ OSO ₂ Me	Ms	H
	CH _z C ≡CH	Me	C1	CHMe0S0 = Me	Мs	H
15	$CH_2CH = CH_2$	Йe	CeK	CH₂OH	Ms	H
	CH ₂ CH=CH ₂	Me	ИеО	CH₂0Me	Ms	H
	$CH_2CH = CH_2$	Ме	MeO	CH ₂ OMe	C1	H
	$CH_2CH = CH_2$	Me	MeJ	CH ₂ OMe	MeS	Ħ
	$CH_2CH = CH_2$	Мe	MeO	CH ₂ OMe	MeSO.	H
20	$CH_zCH = CH_z$	Мe	MeO	CHz0Et	Ms	H
	CH ₂ CH=CH ₂	Йe	MeO	CH ₂ OE t	C1	H ·
	$CH_2CH = CH_2$	Me	ИеО	CH ₂ OEt	MeS	H
	$CH_zCH = CH_z$	Мe	. MeO	CH ₂ OE t	MeSO	H
25	$CH_2CH = CH_2$	Me	CeM	CH ₂ OP _T -i	Ms .	H H
	CH ₂ CH=CH ₂	Ме	ИеО	CH ₂ OPr-a	i i i i i i i i i i i i i i i i i i i	H
	CH ₂ CH=CH ₂	Мe	Me0	$CH_2OCH = CH_2$	Ms V-	п Н
	CH _z CH=CH _z	Me	ЖеО	$CH_zOCH_zCH = CH_z$	Ms W-	Н
	$CH_2CH = CH_2$	Me	MeO	$CH_2OCH_2C \equiv CH$ $CH_2OCH_2CH_2CI$	ek ek	H
30	CH ₂ CH=CH ₂	Мe	MeO	CHMeOH	ns Ms	H
	CH ₂ CH=CH ₂ CH ₂ CH=CH ₂	Me Mo	MeO MeO	Cameon Cameome	Ms	H
	$CH_2CH = CH_2$	Me Me	MeO	CHMeOMe	CI	H
	$CH_2CH = CH_2$	Me	neo MeO	CHMeDMe	MeS	H
35	$CH_2CH = CH_2$	ne Me	MeO	CHMedite CHMedite	MeS0	H
	$CH_2CH = CH_2$	Me	MeO	CHMeOE:	Ms	Ĥ
	$CH_2CH = CH_2$	Иe	MeO	CH ₂ CH ₂ OMe	Ms	H
	$CH_2CH = CH_2$	Мe	MeO	CH ₂ CH ₂ OEt	Ms	H
	$CH_2CH = CH_2$	Иe	МеЭ	CHEtOH	Ms	H ·
40	$CH_2CH = CH_2$	Ме	MeO	CHE tOMe	Ms	H
	$CH_zCH = CH_z$	Ме	CeM	CHE tOE t	Ms	H
	$CH_zCH = CH_z$	Мe	MeJ	CH ₂ OCH ₂ CH ₂ OMe	Мs	H
	$CH_2CH = CH_2$		Же Э	Cii:\Me:	Ms	H
45	$CH_2CH = CH_2$		Сэм	CH ₂ OCH ₂ Ph	Ms	H
	$CH_zCH = CH_z$		MeO	CH ₂ OCH ₂ CO ₂ Me	Ms	H
	CH ₂ CH=CH ₂		MeO	CH=OCH=CO=Et	Ms	H
	$CH_zCH = CH_z$		MeO	CH zOCHMeCO zMe	Ms	H

_	A.	Е	X	Ÿ	Z	Q
5	CH ₂ CH = CH ₂	Же	ЖeO	CHaCN	Иs	H
	$CH_2CH = CH_2$	Иe	MeO	CH _z SMe	Ms	H
	$CH_2CH = CH_2$	Me	MeO	CH ₂ SEt	Ms	H
	$CH_zCH = CH_z$	Me	MeO	CH _z SO _z He	Ms	H
10	$CH_zCH = CH_z$	Мe	MeO	CH _z SO _z E:	Ms	H
	$CH_zCH = CH_z$	Мe	МеО	CH2SCH2CH2OMe	Мs	H
	$CH_2CH = CH_2$	Мe	ИеО	CH ₂ OCOMe	Жs	H
	$CH_zCH = CH_z$	Me	MeO	CHMe9C0Me	Ms	H
15	$CH_2CH = CH_2$	Me	Neo	CH ₂ OSO ₂ Me	Ms	H
15	$CH_2CH = CH_2$	Me	MeJ	CHMe0S0 _z Me	Ms	Ħ
	CH₂C ≡CH	Me	MeO	CH ₂ OH	Ms	Н Н Н
	CH ₂ C ≡CH	Мe	Me0	CH _z OMe	Мs	H
	CH₂C ≡CH	Мe	MeO	CH ₂ OMe	C1	H
20	CH ₂ C ≡CH	Мe	MeO	CH _z OMe	MeS	H
	CH _z C ≡CH	Me	ИeЭ	CH _z OMe	MeSO	Ħ
	CH _z C ≡CH	Мe	MeO	CH _z OE t	Ms	H
	CH ₂ C ≡CH	Мe	CeK	CH _z OE t	Ci	H
	CH _z C ≡CH	Мe	MeO	CH ₂ OE t	MeS	H
25	CH₂C ≡CH	Me	Ceff	CH _z OE t	MeS0	H
	CH ₂ C ≡CH	Йe	MeO	CHzOPr-i	Ms	H
	$CH_zC \equiv CH$	Мe	MeO	CHzOPr-n	Жs	H
	CH ₂ C ≡CH	Мe	MeO	$CH_zOCH = CH_z$	Иs	H
30	CH ₂ C ≡CH	Мe	MeO	$CH_2OCH_2CH = CH_2$	гħ	H
	$CH_zC \equiv CH$	Жe	í MeO	CH ₂ OCH ₂ C ≡CH	Ms	H
	CH₂C ≡CH	Мe	MeO	CH2OCH2CH2C1	Νs	Ħ
	CH ₂ C ≡CH	Мe	MeO	CHMeOH	Ms	H
	$CH_2C \equiv CH$	Мe	MeO	CHMe0Me	Ms	H
35	$CH_{z}C \equiv CH$	Мe	МеО	СЖМеОМе	C1	H
	$CH_2C \equiv CH$	Мe	МеЭ	CHMe0Me	MeS	H
	$CH_2C \equiv CH$	Мe	. MeO	CHMe0Me	MeS0	H
	CH ₂ C ≡ CH	Ме	CeM	CHMeOE t	Ms	H
40	$CH_{z}C \equiv CH$	Me	CeM	CH2CH2OMe	χ	H
40	CH = CH	Жe	CeM	CH ₂ CH ₂ OEt	zĶ	H
	CH ₂ C ≡ CH	Жe	ОеК	CHE tOH	Жs	H
	CH₂C ≡CH	Жe	MeO	CHE tOMe	Мs	H
	CH ₂ C ≡ CH	Мe	MeO	CHECCE	ăs V	H H
45	$CH_2C \equiv CH$	Мe	Ceff	CH 20CH 2CH 20Me	Ms Ma	n H
	CH ^z C ≡ CH .		MeO	CH ₂ NMe ₂	Ms Ma	Ħ
	CH ₂ C ≡CH	Мe	MeO	CH ₂ OCH ₂ Ph	Ms Ms	H
	CH ₂ C ≡ CH	Me	MeO	CH = OCH = CO = Me	ris	

A		Ε	X	Y	Z	Q
CH _z C ≡	≡CH	Мe	ОеМ	CH2OCH2CO2Et	Иs	H
CH _z C ≡	≡CH	Мe	MeO	CH ₂ OCHMeCO ₂ Me	Ms	H
CH ₂ C ≡	≡CH	Йe	Ceff	CH₂CN	Ms	
CH₂C ≡	≡CH	Мe	MeO	CH ₂ SMe	Иs	Ĥ
CH ₂ C ≡		Мe	MeO	CH _z SE t	Ms	H
CH _z C ≡	≡СН	Мe	MeO	CH ₂ SO ₂ Me	Ms	H
CH ₂ C ≡	≡СН	Мe	MeO	CH ₂ SO ₂ Et	Ms	H H H H
CH 2C =	≡CH	Йe	MeO	CH2SCH2CH2OMe	Ms	Ħ
CH 2C ≡		Иe	MeO	CH ₂ OCOMe	Ms	H H
CH₂C ≡		Мe	MeO	CHMe0C0Me	Ms	H
	≡CH	Ме	MeO	CH ₂ OSO ₂ Me	Ms	H
CH₂C ≡		Me	Ме	CHMe0S0zMe	Ms	Ĥ

	1e 1e 1e 1e 1e	CF: CF: CF: CF: CF:	Me Me Me	CH ₂ OMe CH ₂ OEt CHMeOMe CHMeOEt	Иs Иs Иs	ннинининининин
Medelelelelelelelelelelelelelelelelelele	1e 1e 1e 1e 1e	CF = CF = CF =	Me Me Me	CHzOEt CHMeOMe	Иs	H H
	1e 1e 1e 1e 1e	CF: CF: CF:	Me Me	CHNeOMe		Ħ
Medelelelelelelelelelelelelelelelelelele	1e 1e 1e 1e	CF: CF:	Ме		ris	
the see see see see see see see see see s	ie ie ie	CF =				H
Meete ee ee ee ee ee ee ee ee ee ee ee ee	1e 1e	CF a		CH CH ON-	Ms	Ħ
Medele e e e e e e e e e e e e e e e e e	îe		Ме	CH ₂ CH ₂ OMe	Ms	H
Heele ee ee ee ee ee ee ee ee ee ee ee ee		CF ₃	Me	CH _z CH _z OEt	Мs	н
Mee ee	15	CF a	Йe	CHE to Me	Мs	H
Make de de de de de de de de de de de de de		C2 C3 3	Me	CHE tOE t	Жs	H
Nee de de de de de de de de de de de de d		CF ₃	Ме	CH ₂ OCH ₂ CO ₂ Me	Мs	H
He ee ee ee ee ee ee ee ee ee ee ee ee e		CF 3	Ме	CH _z SMe	Ms	H
Me entititititititititititititititititititi		CF3	Ме	CH ₂ SE t	Ms	H
Meetititititititititi		CF₃	Иe	CH _z SO _z Me	Ms	Ä
MEEEEEEEEEEEEEEEEEE		CF ₃	Ме	CH ₂ OCOMe	Ms	H
MEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE		CF 3	Me	CHMeOCOMe	Ms	H
	ie •	CF 3	Иe	CH ₂ 0S0 ₂ Me	Ms	H
EEEEEEEEEEEEEE	ie	CF 3	Иe	CHMeOSO ₂Me	Ms	H
EEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE	Ĭ.	CF 3	Мe	CH₂0Me	Ms	H
EHEEEEEEEEEEE	Ĺ	CF ₃	Ме	CH _z OEt	Ms	H
EEEEEEEEEEEE	t	CF ₃	Мe	СНМеОМе	Ms	H
EEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE	t	CF 3	Иe	CHMeOE t	Мs	H
30 E E E E E E E E E E E E E E E E E E E	t	CF ₃	Мe	CH _z CH _z OMe	Ms	H
E E E E E E E E E E E E E E E E E E E	Ė	CF 3	. Me	CH ₂ CH ₂ OEt	Ms	H
	E	CF3	Мe	CHE tOMe	Мs	H
25 Et t t t t t t t t t t t t t t t t t t	t	CF ₃	Йe	CHE tOE t	Ms	H
35 Et Et Et Et Et Et Et Et Et Et Et Et Et	t	CF ₃	Мe	CHzOCHzCOzMe	гMs	H
35 Et Et Et Et Et Pr.		CF =	Мe	CH _z SMe	Ms	H
Et Et Et Et Et Pri		CF ₃	Мe	CH = SE t	Ms	Н
Et Et Et Pr-	Ė	CF a	Мe	CH ₂ SO ₂ Me	Ms.	H
Et Et 40 P:-	i.t	CF ₂	Ме	CH ₂ 0C0Me	Ms	H H H H
40 PT-		CF 3	Me -	CHMeOCOMe	Ms	H
40 PT-		CF ₃	Ме	CH 20S0 zHe	Ms	H
		CF₃	Мe	CHMeOSOzMe	Ms	H
Pr-	r-i	CF =	Ме	CH ₂ 0Me	Жs	H
	r-i	CF ₃	Йe	CH = OE t	Ms	Ĥ
P	i	CF ₃	Йe	CHMeOMe	Ms	Ĥ
	r-i	. CF 3	Жe	CHMeOE t	Ms	H
P		CF 3	∵Me	CH ₂ CH ₂ OMe	Ms.	Ħ
		CF ₃	Иe	CH _z CH _z OE t	Ms	Ħ
		CF ₃	Мe	CHE tOMe	zK	Ħ
Pr-	r-i r-i	CF ₃	Мe	CHE tOEt	Ms	Ĥ

A E X Y	
n conzecutive in	
n	
Pr-i	
Pr-i CF: Me	
Pr-i CF: Me	
Pr-1 CF: Me CHMe0C0Me Ms H Pr-1 CF: Me CH20S02Me Ms H Pr-1 CF: Me CH20S02Me Ms H Pr-1 CF: Me CH20Me Ms H Me CF: CI CH20Me Ms H Me CF: CI CH20Me Ms H Me CF: CI CH40Me Ms H Me CF: CI CH40Me Ms H Me CF: CI CH40Me Ms H Me CF: CI CH20Me Ms H Me CF: CI CH20Me Ms H Me CF: CI CH2CH20Me Ms H 20 Me CF: CI CH2CH20Et Ms H	
Pr-1 CF: Me CH2OSO2Me Ms H Pr-1 CF: Me CH4OSO2Me Ms H Me CF: CI CH2OMe Ms H Me CF: CI CH2OMe Ms H Me CF: CI CH4OMe Ms H Me CF: CI CH2OMe Ms H Me CF: CI CH2CH2OMe Ms H Me CF: CI CH2CH2OME	
Pr-i CF: He CHMeOSO:Me Ms H Me CF: CI CH:OMe Me CF: CI CH:OME ME CF: CI CH:OME ME CF: CI CH:OME ME CF: CI CH:OME ME CF: CI CH	
15 Me CF = CI CH = OMe Ms H Me CF = CI CH = OHe Ms H Me CF = CI CHMeOMe Ms H Me CF = CI CHMeOEt Ms H Me CF = CI CH = CH = OMe Ms H 20 Me CF = CI CH = CH = OEt Ms H	
Me CF: CI CH:00He Ms H Me CF: CI CHMe0Me Ms H Me CF: CI CHMe0Et Ms H Me CF: CI CH:2CH:20Me Ms H 20 Me CF: CI CH:2CH:20Et Ms H	
Me CFz CI CHMeOMe Ms H Me CFz CI CHMeOEt Ms H Me CFz CI CHzCHzOMe Ms H 20 Me CFz CI CHzCHzOEt Ms H	
Me CF_2 CI CHMeOEt Ms H Me CF_2 CI CH_2CH_2OMe Ms H 20 Me CF_3 CI CH_2CH_2OEt Ms H	
Me CF_2 CI CH_2CH_2OMe Ms H 20 Me CF_3 CI $CH_2CH_2OE_1$ Ms H	
20 Me CF ₃ CI CH ₂ CH ₂ OEt Ms H	
THE CLY CI CHECKETOLE MS H	
Me CF ₃ CI CHE tOMe Ms H	
Me CF_3 CI CHE $tOMe$ Ms H Me CF_3 CI CHE $tOEt$ Ms H	
Me CF: CI CHE:OE: Ms H Me CF: CI CH-OCH:CO:Me Ms H	
Me CF: Cl CHzOCHzCOzMe Ms H Me CF: Cl CHzSMe Ms H	
25	
0115050	•-
0112000110	
difference 115	
117 11	
- 115 II	
Et CF ₃ Cl CH ₂ OMe Ms H Et CF ₇ Cl CH ₂ OEt Ms H	
110	
E: CF: CI CHMeOMe Ms H	
Et CF= C1 CH2CH2OMe Ms H Et CF= C1 CH2CH2OEt Ms H	
Et CF3 CI CHEtOMe Ms H	
Et CF= C1 CHEtOEt Ms H	
Et CF3 C1 CH2OCH2CO2Me Ms H	•
LI CF- CI CY-SMA Me H	
Et CF= CI CH=SEt Ms H Et CF= CI CH=SO2Me Ms H	
45 Et CF3 C1 CH2OCOMe Ms H	
Et CF3 C1 CHMeOCOMe Ms H	_
Et CF_{\pm} $C1$ $CH_{\pm}OSO_{\pm}Me$ Ms H	
Et CF3 C1 CHMeOSOzMe Ms H	

£	A	Е	Χ	Y	Z	Q.
5	Pr-i	CF3	C1	CH ₂ OMe	ăs -	H
	Pr-i	CF:	C1	CHaOEt	Ms	Ħ
	Pr-i	CF 3	CĪ	CHMeOMe	Мs	H H ·
	Pr-i	CF:	ČÎ	CHMeOE t	Ms	.
10	Pr-i	CF ₃	ČÌ	CH ₂ CH ₂ OMe	Ms	Ħ
	Pr-i	CF:	CI	ch _z ch _z chc tec _r ch _z ch	Ms	Ħ
	P r -i	CF ₃	Cl	CHE tOMe	XIS	Ħ
	Pr-i	CF:	Cl	CHE to E t	Ms	H H H H
	Pr-i	CF:	Cl	CH ₂ OCH ₂ CO ₂ Me	Иs	Ĥ
15	P r -i	CF:	CI	CH ₂ SMe	Ms	. .
	Pr-i	CF:	CI	CH ₂ SE t	zK sk	Ħ
	Pr-i	CF 3	C1	CH _z SO _z Me	Ms	Ħ
	Pr-i	CF ₃	CI	CH ₂ OCOMe	Ms	ä
20	Pr-i	CF a	Cl	CHMeOCOMe	Ms 2K	Ħ
20	Pr-i	CF ₃	C1	CH 20S0 zMe	Ms	Ħ
	Pr-i	CF ₃	CI	CHMeOSO zhe	Ms	Ħ
	Йe	Et	Me	CH ₂ OMe	Ms	H
	Me	Et	Me	CH ₂ OEt	Ms	H
25	Me	Et	Me	CHMeOMe	Ms	нннннннннн
	Me	Et	Me	CHMeOEt	Ms	H
	Иe	Et	Me	CH ₂ CH ₂ OMe	Ms	H H
	Иe	Et	Ме	CH ₂ CH ₂ OEt	Ms	H
	Иe	Et	Me	CHE tOMe	Ms	Ħ
30	Me	Et	Me	CHE totle	Ms	н
	Me	Et	Me	CHzOCHzCOzMe	Ms	й
	Me	Et	Ме	CH ₂ SMe	Ms	H H
	Иe	Et	Me	CH ₂ SE:	Ms	H
35	Иe	Et	Me	CH _z SO _z Me	Ms	H H
•••	Йe	Et	Ме	CH ₂ OCOMe	er. SK	Ħ
	Ме	Et	Ме	CHMeOCOMe	Ms	Ĥ
	Йe	Et	Ме	CH ₂ OSO ₂ Me	Ms	H H H H
	Ме	Et	Иe	CHMeOSO 2:Me	Ms	H
40	Et	Et	Me	CH ₂ 0Me	zK	Ĥ
	Et	Et	Ме	CH ₂ OEt	Ms	Ħ
	E ÷	E÷		CHMe0Me	Ms	**
	Et Et	Et Et	Ме Ме	CHMeOE t	Ms	H H H H
	Et	, E:	Иe	CH ₂ CH ₂ OMe	Ms	H.
45	E:	Et	ne Me	CH _z CH _z OFt	Ms	Ħ
	Et Et	Et	ne Me	CHE tOMe	Ms	Ħ
	Et	Et		CHE tone CHE to Et	Ms	H
	<u>ان</u>	E 5	Ме	GRE LUE L	11-3	

					•	
5	A	В	Х	Y	Z	Q.
	Et	Et	Йе	CH2OCH2CO2Me	Иs	H ·
	Et	Εt	Мe	CH₂SMe	Ms	Ħ
	Et	Εŧ	Мe	CH _z SEt	Ms	H
10	Et	Εt	Иe	CH _z SO₂Me	Ms	Ĥ
-	Et	Εt	lie	CH ₂ OCOMe	Ms	Ħ
	Et	Εt	Мe	CHMeOCOMe	Ms	Ħ
	Εċ	Εt	Иe	CH=0S0zMe	Ms	Ħ.
	Εt	Εt	Me	CHMeOSOzMe	Ms	H H
15	Pr-i	Εt	Me	CH _z OMe	Ms	H
	P r -i	Et	Me	CH ₂ OEt	ds.	й
	P=-i	Εt	Йe	СНИеОМе	Ms	H
	Pr-i	Et	Иe	CHMeOEt	Ms	нинниннин
	Pr-i	Et	Ме	CH _z CH _z OMe	Ms	H
20	Pr-i	Et	Ме	CH ₂ CH ₂ OEt	iis Ns	Ħ
	Pr-i	Et	Me	CHE tOMe	Ms	H
	Pr-i	Et	Йe	CHE tOE t	Ms	H
	Pr-i	Eŧ	Иe	CH ₂ OCH ₂ CO ₂ Me	Ms	Ħ
05	Pr-i	Ēŧ	Me	CH ₂ SMe	Ms .	H
25	Pr-i	Et	Иe	CH ₂ SE t	Ms	H II
	Pr-i	Εt	Me	CH _z SO _z Me	Ms	H H H
	Pr-i	Et	Йe	CH ₂ OCOMe	XS .	H II
	P=- i	Et	Ме	CHMe0C0Me	Ms	H
30	Pr-i	Et	Мe	CH _z OSO _z Me	zK zK	H
	Pr-i	Et	Мe	CHMeOSO zHe	Ms	H
	Me	Et	C1	CH ₂ OMe	zK zK	H
	Мe	Εt	Cī	CH ₂ OE t	Ms	H
	Йe	Et	CI	CHMe0Me	Ms	H H
35	Me	Εt	C1	CHMeOE t	e Ms	H .
	Me	Et	ĊĪ	CH _z CH _z OMe	Ms	H H H
	Me	Et	CI	CH ₂ CH ₂ OE t	Ms	H
	Йe	Et	C1	CHE tOMe	Ms	H H
40	Мe	Et	CI	CHE tOE t	ZK	H H
40	Мe	Εt	CĪ	CH=OCH=CO=Me	Иs	Ħ
	Мe	Et	CI	CH 2 SMe	Ms	Ĥ
	Me	Et	Ci	CHaSEt	Ms	
	Me	Et	CI .	CH _z OO _z He	Ms	H H
45	Мe	. Et	C1	CH ₂ OCOMe	Ms	H
	Йe	Et	Cl	CHMe0COMe	Ms	H
	йе ,	Ēŧ	C1	CH ₂ 0S0 ₂ Me	Ms	H
	Me	Et	CI	CHMeOSO _z He	Ms	Ħ
		 	~ <u> </u>		,,,,	

5	.A.	В	Х	Y	Z	Q.
Ū	Et	Εŧ	CI	CH ₂ OMe	Ms	H
	Εt	Εt	Cl	CH _z OEt	Мs	H
	Εŝ	Εt	C1	CHMeOMe	Иs	ннннннннннннннннн
	Εċ	Et	C1	CHMeOE t	Ms	H ·
10	Εt	Εt	CI	CH ₂ CH ₂ OMe	Ms	Ĥ
	Et	Et	Ci	CH _z CH _z OEt	Ms	Ħ
	Εċ	Et	Cl	CHE tOMe	Ms	Ħ
	Εŧ	Et	Cl	CHEtOEt	Ms	Ħ
15	Et	Et	Ci	CH ₂ OCH ₂ CO ₂ Me	ali	ਸ
,,	Et	Εŧ	Ci	CH ₂ SMe	Ms	Ĥ
	Et ·	Et	Cl	CH _z SE t	Иs	Ä
	Et	Et	Čì	CH _z SO _z Me	Ms	Ħ
	Et	Ēŧ	Cl	CH 20C0Me	Ms ·	ਜੋ
20	Et	Ēŧ	CI	CHMeCCOMe	Ms	ਸ
	Et	Et	Cì	CH ₂ OSO ₂ Me	Ms	H
	Et	Et	Cl	CHMeOSO zMe	Ms	Ħ
	Pr-i	Ēt	Cl	CH 20Me	Ms .	Ħ
	P r -i	Et	Cl	CH ₂ OEt	Ms	ä
25	Pr-i	Et	Cl	СНМеОМе	zK	H .
	Pr-i	Et	CI	CHMeOEt	Ms	, <u>n</u>
	Pr-i	Et	Cl	CH ₂ CH ₂ OMe	Ms .	H.
	Pr-i	Et	CI	CH ₂ CH ₂ OEt	Ms	n n
	Pr-i	Et	Cl	CHE:OMe	Ms	H
30	Pr-i	Et	CI	CHETORE	Ms	H
	Pr-i	Et	CI		ns Ms	H
	Pr-i	Et	CI	CH 20CH 2CO zMe	ns Ms	H
	Pr-i	D L		CH ₂ SMe	ns Ms	H
35	Pr-i	Et	Cl	CH ₂ SEt	ns Ms	H
•••		Et	CI	CH 2SOzile	iis Ms	H
	Pr-i Pr-i	Εt	C1	CH ₂ OCOMe		Ω. Β
		Et	CI	CHMeOCOMe	.¥-	H H H H
	Pr-i	Et	Cl	CH ₂ OSO ₂ Me	žš.	<u>п</u> п
40	Pr-i	Et	CI	CHMeOSO _z Me	йs	п
	Ме	CH ≥0Me	Мe	CH 20Me	Ms	п
	Ме	CH = OMe	Me	CH = OE t	Иs	H
	Жe	CH =OMe	Мe	СНМеОМе	Ms	H
	Ме	CH _z OMe	Мe	CHMeOE t	Мs	H
45	Me	. CH =OMe	Мe	CH _z CH _z OMe	Ms	H
	Me	CH = OMe	Мe	CH ₂ CH ₂ OE t	Ms	H
	Me ·	CH = OMe	Мe	CHE tOMe	Ms -	- H
	lle ·	CH 20Me	Йe	CHE tOE t	Ms	H

5	A	Б	Х	Y	Z	G.
	Ме	CH=0Me	Мe	CH2OCH2CO2Me	Ms	H
	Иe	CH₂0Me	Иe	CH _z SMe	Ms	Н
	Мe	CH≈0Me	Мe	CH ₂ SE t	Ms	H
	Ме	CH ₂ OMe	Иe	CH ₂ SO ₂ Me	Мs	H
10	Мe	CH ₂ OMe	Мe	CH _z OCOMe	Ms	Ĥ
	Мe	CH _z OMe	Me	CHMeOCOMe	Ms	H
	Ме	CH _z OMe	Мe	CH _c OSO _c He	Мs	H H H H H
	Ме	CH ₂ OMe	Me	CHMeOSO _z Me	Ms	Ħ
15	Et	CH ₂ OMe	Йe	CH ₂ OMe	Ms	H
	Et	CH ₂ 0Me	Ие	CH ₂ OE t	Иs	Ħ
	Et	CH _z OMe	Йe	CHMeOMe	Ms	H
	Et	CH ₂ 0Me	Йe	CHMeOE t	2K	н
	Ēt	CH ₂ OMe	йe	CH ₂ CH ₂ OHe	- Ms	H
20	Et	CH _z OMe	Иe	CH ₂ CH ₂ OE t	Ms	Ħ
	Et	CH ₂ OMe	Иe	CHE tOMe	Ms	Ä
	Et	CH _z OMe	Иe	CHE tOE t	Ms	Н Н Н Н Н
	- Et	CH ₂ OMe	Me	CH ₂ OCH ₂ CO ₂ He	Ms	n n
	Et	CHzOMe	Иe	CH ₂ SMe	Ms	и <u>п</u>
25	Et	CH ₂ OMe	Иe	CH ₂ SEt	Ms	нннннннннн
•	Et	CH ₂ OMe	Иe	CH _z SO _z Me	Ms	n n
	Et	CH ₂ OMe	ile	CH ₂ OCOMe	Ms	n n
	Et	CH ₂ OMe	Me	CHMeOCOMe	Ms	H
	Et	CH ₂ OMe	Иe	CH20S02Me	Ms	n n
30	Et	CH ₂ OMe	Me	CHMeOSO zMe	Ms	u u
	Pr-i	CH ₂ OMe	йe	CH ₂ 0Me	Ms	п
	Pr-i	CH ₂ OMe	ne Me	CH ₂ OEt	Ms	11
	P r -i	CH ₂ OMe	ne Me	CHMeOMe	Ms	n u
35	Pr-i	CH ₂ OMe	Иe	CHMeOne CHMeOE t	iis Ms	П. U
	Pr-i	CH ₂ OMe	Иe	CH ₂ CH ₂ OMe	. ds	. <u>II</u>
	Pr-i	CH ₂ OMe	ne Me	CH ₂ CH ₂ OEt	en EM	n T
	Pr-i	CH ₂ OMe		CHE : OHe	Ms	H
	Pr-i		Me	CHE torie CHE tOE t	Ms	H
40	Pr-i	CH _z OMe	Ме		ms Ms	H
	Pr-i	CH ₂ OMe	Ме М-	CH_COCH_COO_Me	ris Ms	H
		CH ₂ OMe	Me	CH ₂ SMe		H
	Pr-i	CH₂OMe	Ме	CH ≤SE t	ns Ns	H ·
	Pr-i	CH ₂ OMe	Ме	CH₂SO₂He		н .
45	Pr-i	·CH ₂ OMe	Ме	CH ₂ OCOMe	ids Ma	H
	Pr-i	CH zOMe	Ме	CHMeOCOMe	Ms Ms	n H
	Pr-i	CH _z OMe	Ме	CH ₂ OSO ₂ Me	-∦s -×-	n H
	Pr-i	CH=0Me	Мe	CHMeOSO _z Me	ZM Z	π

	A.	B	X	Y	Z	Q.
5	Нe	CH ₂ OMe	CI	CH₂0Me	ăs	Ħ
	iie Me	CH ₂ OMe	CI	CH=0E±	Ms	
	Me	CH _z OMe	Ci	CHMeOMe	Жs	ннинининнинининининининининининини
	Иe	CH zOMe	ČÌ	CHMeOEt	Мs	H
10	Me	CH ₂ OMe	či	CH ₂ CH ₂ OMe	Мs	H
	Me	CH ₂ OMe	CI	CH ₂ CH ₂ OEt	Ms	H
	Ме	CH ₂ OMe	Cī	CHE tOMe	zK	H
	Me	CH = OMe	Ci	CHE tOE t	Ms	H
	Иe	CH = OMe	Cī	CH=OCH=CO=Me	Ms	H
15	йe	CH ₂ OMe	ČĪ	CH ₂ SMe	Мs	H
	Йe	CH₂OMe	CI	CH 2SE t	zK	H
	йe	CH ₂ OMe	CI	CH z SO z He	Ms	H
	йe	CH = OMe	CI	CH _z OCOMe	aK	H
20	Ме	CH ₂ OMe	C1	CHMeOCOMe	Ms	H
	Ме	CH ₂ OMe	ČÌ	CH ₂ OSO ₂ Me	Ms	H
	Me	CH _z OMe	CI	CHMeDSOzMe	Ms	H
	Et	CH ₂ OMe	Cī	CH 20Me	Ms	H
	Et	CH ₂ OMe	C1	CHzOEt	ZК	H
25	Et	CH ₂ OMe	ČĪ	CHMe0Me	Ms	H
	Et	CH _z OMe	Ci	CHMeOEt	zK	H
	Εt	CH ₂ OMe	ČÌ	CH 2CH 20Me	Ms	H
	Et	CH ₂ OMe	Ci	CH2CH2OEt	Иs	H
	Et	CH ₂ OMe	ČÌ	CHE tOMe	Ms	H
30	Et.	CH z OMé	CI	CHE tOE t	ls	H
	Et	CH ₂ OMe	Cl	CH2OCH2CO2Me	Ms	H
	Et	CH ₂ OMe	Cī	CH₂SMe	Ms	. Н
	Et	CH ₂ OMe	ČÌ	CH ₂ SEt	Ms	H
35	Εt	CH ₂ OMe	CI	CH ₂ SO ₂ Me	Ms	H
-	Et	CH = OMe	Cl	CH ₂ OCOMe	Ms	H
	Et	CH _z OMe	Cī	CHMeOCOMe	Ms	H
	Ēŧ	CH ₂ OMe	ĊĨ	CH ₂ OSO ₂ Me	Ms	H
	Et	CH ₂ OHe	Ci	CHMeOSO zMe	Ms	H
40	Pr-i	CH ₂ OMe	ČĪ	CH _z OMe	ХS	H
	Pr-i	CH ₂ OMe	Cī	CH _z OE t	Ms	
	Pr-i	CH ₂ OMe	Cl	CHMe0Me	zK	Ħ
	Pr-i	·CH ₂ OMe	Ci	CHMeOE t	zk	Ħ
	Pr-i	CH ₂ OMe	ČÌ	CH ₂ CH ₂ OMe	Ms	H H H
45	Pr-i	CH ₂ OMe	Cì	CH ₂ CH ₂ OEt	zk	H .
	Pr-i	CH ₂ OMe	CÎ	CHEtOMe	Ms	Ħ
	Pr-i	CH _z OMe	CI	CHE tOE t	zK	H

0 282 944

5	A	Е	X	Y	Z	Q.
	Pr-i	CH _z OMe	Cl	CH ₂ OCH ₂ CO ₂ He	zK	H
	Pr-i	CH ₂ OMe	CI	CH ₂ SMe	Иs	Ħ
	Pr-i	CH _z OMe	CI	CH2SE:	Ms	Ĥ
10	P r -i	CH ₂ OMe	CI	CH _z SO _z Me	Ms	Ĥ
,0	Pr-i	CH zOMe	C1	CH _z OCOMe	Ms	H
	Pr-i	CH = OMe	C1	CHMeOCOMe	Ms	H
	Pr-i	CH ₂ OMe	CI	CH ₂ OSO ₂ :Me	Ms	H
	Pr-i	CH = OMe	CI	CHMeOSO 2Me	Мs	H
15	Мe	0Me	Мe	CH=OMe	Ms	H
	Мe	0Me	Me	CHzOEt	Ms	H
	Me	OMe	Мe	CHMeOMe	Ms	H ·
	Me	0Me	Йe	CHMeOEt	Ms	H
	Me	0Me	Мe	CH ₂ CH ₂ OMe	Ms	H
20	Me	0Me	Me	CH ₂ CH ₂ OE t	Ms	H
	Me	0Me	Me	CHEtOMe	Ms	H
	Me	0Me	Мe	CHE tOE t	Ms	H
	Мe	0Me	Иe	CH ₂ OCH ₂ CO ₂ Me	Ms	- Н
25	Мe	0Me	Иe	CH ₂ SMe	Ms	H
	Мe	0Мe	Иe	CH ₂ SEt	Ms	ннннннннннннннн
	Me	0Me	Йe	CH _z SO _z Me	Ms	H
	Me	0Me	Мe	CH_zOCOMe	Ms	H
	Мe	0Me	Иe	CHMe0C0Me	Ms	H
30	Me	0Me	Йe	CH ₂ OSO ₂ Me	Ms	H
	Мe	0Me	Мe	CHMeOSO _z Me	Ms	H
	Et	0Me	Иe	CH ≥0Me	Мs	H
	Et	0Me	Мe	CH _z OE t	Ms	H
35	Εŧ	0Me	Йe	CHMeOMe	Ms	H H H H H
35	Et	0Me	Мe	CHMeOE :	Ms	
	E t t t t	0Me	Мe	CH 2CH 20Me	Ms	H H · H
	Εt	0Me	Мe	CH ₂ CH ₂ OE t	Яs	H ·
	Et	0Me	Ме	CHE tOMe	Ms	H
40	Εt	0Me	Мe	CHEtOEt	Ms	H
	Εt	0Me	Ие	CH 20CH 2CO 2Me	Ms	H
	Et	0Me	Мe	CH ₂ SMe	Ms	H
	Et Et	. 0∦e	Йe	Cii₂SEt	Иs	H
	٤٤	0Me	Мe	CH ₂ SO ₂ Me	Ms	H H
45	Et	0Me	Мe	CH ₂ OCOMe	Ms	n ·
	Et	0Me	Me	CHMeOCOMe	Ms	H H
	Et '	0Me	Мe	CH=0SO=Me	Ms	n v
	Et	0Me	Иe	CHMeOSO₂Me	Ms	H

•	Å	E	X	Y	Z	Ę.
5	P - -i	0Me	Мe	CH ₂ OMe	Ms	Ħ
	Pr-i	one OMe	ne Me	CH ₂ OEt	Ms.	ннининининининининининининининининини
	Pr-i	0Me	йe	CHHeOHe	Ms	Ħ.
-		one One	Иe	CHMeDE t	Ms	Ħ
10	Pr-i		ne Me	CH _z CH _z OMe	Ms	H II
	Pr-i	0Me		CH ₂ CH ₂ OH ₂ CH ₂ CH ₂ OE t	Ms	н .
	Pr-i	OMe	Me	CHE tOMe	Ms	Ħ
	Pr-i	OMe	Ме	CHE tone CHE toE t	Ms	H
	Pr-i	oxe	Ме		Ms	H II
15	Pr-i	OMe	Ме	CH ₂ OCH ₂ CO ₂ Me	zn Zñ	11 11
	Pr-i	0Me	Ме	CH _z SMe	ns Ms	n n
	Pr-i	0Me	Ме	CH ₂ SEt	ns Ms	II.
	Pr-i	0Me	Иe	CH _z SO _z Me		n, m
	Pr-i	0Me	Мe	CH ₂ OCOMe	Ms H-	П U
20	Pr-i	0Me	Ме	CHMeOCOMe	Ms Y-	П U
	Pr-i	0Me	Ме	CH ₂ 0S0 ₂ Me	Ms	11 17
	Pr-i	0Me	Мe	CHMeOS0₂Me	Ms i	n
	Me	0Me	Cl	CH₂0Me	Мs	H
25	Мe	OMe .	. C1	CH ₂ OE t	Ms	<u>#</u>
	Мe	0Me	Cl	СНМеОМе	Ms	H
	Мe	0Me	CI	CHMeOEt	Ms	H
	Me	0Me	Cl	CH₂CH₂OMe	Ms	H
	Мe	0Мe	C1	CH ₂ CH ₂ OEt	Ms	. <u>Н</u>
30	Мe	0Me	CI	CHE tOMe	Ms	<u>H</u>
	Me	OMe '	C1	CHE tOE t	ak	H
	Мe	0Me	Cl	CH2OCH2CO2Me	Ms	H
	Me	0Me	C1	CH ₂ SMe	z M	H
	Йe	0Me	CI	CH 2SE t	zĸ	H
35	Мe	0Me	Ci	CH ₂ SO ₂ Me	Ms	H
	Мe	0Me	CI	CH ₂ OCOMe	Ms	H
	Me	0Me	CI	СНИеОСОМе	2K	H
	ine ine	0Me	CI	CH 20S0 zMe	Ms	H
	Me	0Me	CI	CHMeOSO zMe	Ms	H
40	Et	9770 9760	Cl	CH 20Me	Ms	H
	Et	0Me	CI	CH ₂ 0Et	Ms	H
	Et	0Me	CI	CHMeOMe	Ms	H
	<u> </u>	· OMe	Cl	CHMeOE t	Ms	H
45	Et Et	one One	CI	CH ₂ CH ₂ OMe	Ms	H
45	E:	one OMe	CI	CH ₂ CH ₂ OE t	Ms	H
	Et		CI	CHE tOMe	Ms	H
	Et , Et	OMe	Cl Cl	CHE tOE t	Ms	H H H H H
	CC	0Me	C1	CHETOEL		

0 282 944

	À.	5	X	Y	Z	Ç.
5	Et	0Me	CI	CH = OCH = CO = Me	Ms	H
	Εt	0Me	Cl	CH₂SMe	Ms	H H H H H H H H H H H H H H H H H H H
	田田田田田田	0Me	Cl	CH ₂ SE t	Ms	H
	Εt	0Me	Cl	CH ₂ SO ₂ Me	Ms	H .
10	Et	0Me	Cl	CH _z 0C0He	Ms	H .
	Έŧ	0Me	CI	CHMeOCOMe	Ms	H
	Æt Et	0Me	CI	CH ₂ OSO ₂ Me	zK	Н
	Εt	0Me	Cl	CHMeOSO zMe	Ms	H
	Pr-i	0He	Cl	CH ₂ OMe	Ms	H
15	Pr-i	0Me	CI	CH=0Et	Ms	H
	Pr-i	0Me	CI	СНИеОМе	Ms	H
	Pr-i	0Me	CI	CHMeOE t	Ms	H
	Pr-i	0Me	CI	CH ₂ CH ₂ OMe	Ms	H
20	Pr-i	0Me	CI	CH _z CH _z OE t	Ms	H
20	Pr-i	0Me	C1	CHE tOMe	Мs	H
	Pr-i	0Me	CI	CHEtOEt	Ms	Н.
	P r -i	0Me	CI	CHzOCHzCOzMe	Ms	H
	Pr-i	0Me	CI	CH _z SMe	Ms	Н
25	P r -i	0Me	ČÌ	CH ₂ SEt	Ms	H
	Pr-i	· OMe	CI	CH _z SO _z Me	Ms	H
	Pr-i	OMe	Cl	CH ₂ OCOMe	Ms	H
	Pr-i	0Me	CI	CHMeOCOMe	Ms	H
	Pr-i	OMe .	CI	CH ₂ OSO ₂ Me	Ms	H
30	Pr-i	OMe	C1	CHMeOSO z Me	Ms	H H H H H H

5	A	Ē	Х	Y	Z	Ç.
5	Me	SMe	Хe	CH _z OMe	Ms	H
	Иe	SMe	Иe	CHzOE±	Ms	нинининининининининининини
	Ме	Side	Йe	CHMe0Me	Ms	Ħ
	Ме	Side	Ме	· CHMeOEt	Ms	H
10	lle lle	SMe	Йe	CHE tOMe	r dis	H
	Ме	SMe	Йe	CHE ±0E ±	Ms	Ħ
	Ме	SMe	C1	CH ₂ OMe	Иs	H
	Ме	SMe	Cl.	CH=OEt	Ms	Н
	Me	SMe	Cl	CHMeOMe	Ms	H
15	Иe	SMe	CI	CHMe0Et	Ms	H
	Et	SMe	Мe	CH ₂ OMe	Ms	H
	Et	SMe	Иe	CH ₂ OE t	Ms	H
	F÷	She	Иe	CHMe0Me	Ms	H
20	Et Et	SMe	Иe	CHMeOE t	Ms	H
	Et	SMe	Мe	CHE tOMe	Ms	H
	Et	SMe	Иe	CHE tOE t	žis.	Ħ
	Et	Sine	Cl	CH₂OMe	Мs	Ħ
	E ÷	She	Cl	CH ₂ OEt	Ms	· H
25	E+	She She	CI	CHMeOMe	Яs	Ħ
	Et Et Et	She	Ci	CHMe0Et	Ms	Ħ
	Pr-i	SMe	Йe	CH ₂ OMe	Ms	Ħ
	Pr-i	SMe	Me	CH ₂ OEt	Ms.	H
	Pr-i	Side	Ме	CHMeOHe	Ms	Ħ
30	Pr-i	SMe ·	Me	.CHMeOEt	Ms	Ĥ
	Pr-i	SMe	Иe	CHE tOMe	Ms	Ĥ
	Pr-i	SMe	Иe	CHE tone	XIS	Ħ
	Pr-i	SMe	Cl	CH=OMe	Ms	Ĥ
35	Pr-i	SMe	C1	CH ₂ OE t	Ms	H
	Pr-i	SMe	Cl	CiiMeOMe	Ms	H
	Pr-i	SMe	CI	CHMeOE t	Ms	Ë
	Me	CH ₂ SMe	Me	CH ₂ OMe	en 2M	H
	Me	C11 CA-	ne Me	CH ₂ OEt	Ms	H
40	ne Me	CH _z SMe CH _z SMe	Me	CHMeOMe	Ms.	H
	Me	CH ₂ SMe	Me	CHMeOE t	Ms	H
	Me	CH ₂ SMe	Me	CHE tOMe	iis ar	Ħ
	Me	CH ₂ SMe	ile Sii	CHE to Et	Иs	H
	Иe	CH ₂ SMe	Cl	CH ₂ OMe	zń zń	Ĥ
45	Me	_	C1	CH ₂ OEt	Ms	Ħ
		CH 2SMe	CI	CHMeOMe	Ms	H
	Me /	CH ₂ SMe		CHMeOEt	zK	Ä
	Me	CH ₂ SMe	Cl	GIRIEUE L	l led	

5	A	В	Х	Y	Z	Q.			
3	Et	CH _z SMe	Йe	CH _c ONe	Жs	H			
	Εt	CH _z SMe	Мe	CH =OE t	Ms	H			
	Et	CH ₂ SMe	Ħе	CHMeOMe	zК	H H			
	Et	CH ₂ SMe	Мe	CHMeOEt	Ms	H			
10	Εt	CH ₂ SMe	Мe	CHE : OHe	zM .	H.			
	Et	CH _z SMe	Мe	CHE tOE t	Ms	H			
	Et	CH₂S∦e	CI	CH₂OMe	Ms	H			
	Εt	CH₂SMe	Cl	CH cOE t	Иs	H			
15	Et Et	CH ₂ SMe	Cl	CHMeOMe	ar de	H			
	Εŧ	CH ₂ SMe	C1	CHMeOEt	Иs	H			
	Pr-i	CH₂SMe	Йe	CH ₂ OMe	Ms	`H			
	Pr-i	CH ₂ SMe	Мe	CH ₂ OEt	zľí	H			
	P r -i	CH_SMe	Мe	СНИеОМе	Ms	H			
20	Pr-i	CH _z SMe	Мe	CHMeOEt	Ms	H			
	Pr-i	CH _z SMe	Мe	CHE tOMe	Ms	нининнинин			
	Pr-i	CH _z SMe	Мe	CHEtOEt	Ms	H			
	Pr-i	CH ₂ SMe	Cl	CH _z OMe	Ms	H			
	Pr-i	CH ₂ SMe	Cl	CH ₂ OE t	Ms · · · ·	Н			
25	Pr-i	CH ₂ SMe	C1	СНИеЭМе	Ms	H			
	Pr-i	CH _z SMe	CI	CHMe0Et	® Ms	H			
	Me	CHzCl	Me	CH _z OMe	Ms	H			
	Me	CHzCl	Me	CH ₂ OE t	Ms	Ħ			
30	Ме	CH ₂ C1	Мe	CHMeOMe	Ms	H			
	Me	CH _z CI	Йe	CHMeOEt	Мs	H			
•	Ме	CH _z C1	Мe	CHE tOMe	Ms	H			
	Me	CH ₂ C1	Me	CHE tOE t	Ms .	H H H H H			
	Ме	CH ₂ C1	Cl	CH ₂ OMe	Ms	H			
35	Me	CH ₂ C1	CI	CH ₂ OEt	- Ms	<u>H</u>			
	Ме	CHzCl	C1	CHMe0Me	Ms	H H			
	Мe	CH ₂ C1	C1	CHMeOE t	Ms	H			
	Et	CH _z C1	Мe	CH ₂OMe	· Ms	H			
40	Et	CH _z C1	Иe	CH ₂ OE t	Мs	H H H			
40	Et	CH2CI	Мe	СНМеОМе	Ms	H			
	Εt	CH _z C1	Мe	CHMeOE t	Ms				
	Et	CH ₂ Cl	Мe	CHE tOMe	Ms	H			
	Εt	CH _z C1	Мe	CHE tOE t	Ms	H			
45	Et	· CH 2C1	Cl	CH 20Me	Ms	H H - H			
	Et	$CH_{z}CI$	C1	CH _z OE t	Ms	H			
	Et -	CH _z C1	CI	CHMeOMe	Ms -	- H			
	Et	CH ₂ C1	C1	CHMeOE t	Ms	H			
		_							

	A	E	X	Y	Z	Q
5	Pr-i	CH _z C1	Иe	CH ₂ OMe	Иs	Н
	P . - i	CH ₂ Cl	Ме	CH ₂ OE t	Ms	H
	Pr-i	CH ₂ Cl	Иe	СНМеОМе	Ms	H
	Pr-i	CH _z Cl	Ме	CHMeOE:	Ms	H
0	Pr-i	CH _z C1	Me	CHE tOMe	Мs	H
	Pr-i	$CH_{z}CI$	Иe	CHE tOE t	Ms	H
	Pr-i	CHzCl	Cl	CH₂0Me	Ms	H
	Pr-i	CHaCl	CI	CH ₂ OE t	Ms	H
	Pr-i	CHzCl	C1	CHMeOMe	Ms	H
5	Pr-i	CH _z C1	CI	CHMeOEt	Ms	H

						
_	A	В	X	Y	Z	Q.
5	Нe	H	CH ₂ OMe	CH ₂ OH	Ms	H
	Мe	Ħ	CH _z OMe	CH₂OMe	ns Ms	Π tr
	Мe	Ħ	CH 20Me	CH ₂ OMe	C1	H
	Мe	Ĥ	CH ₂ OMe	CH ₂ OMe	MeS	П
10	Йe	Ä	CH _z OMe	CH ₂ OMe	MeSO	<u>п</u> т
	Ме	Ĥ	CH ₂ OMe	CH ₂ OE t	Ms Ms	п
	Мe	H	CH ₂ OMe	CH ₂ OE t	CI	H H H H H H H H H H H H H H H H H H H
	Мe	Ĥ	CH ₂ OMe	CH ₂ OE t	MeS	រ. ម
	Ме	H	CH ₂ OMe	CH ₂ OE t	MeSO	Ω U
15	Me Me	H	CH _z OMe	CHzOPr-i		n u
	Иe	H	CH _z OMe	CH ₂ OPr-n	Ms Ms	n u
	Мe	H	CH _z OMe	$CH_2OCH = CH_2$		n u
	Ме	H	CH _z OMe	$CH_2OCH_2CH = CH_2$	Ms Ma	П 17
00	Иe	H	CH ₂ OMe	$CH_2OCH_2CH = CH_2$ $CH_2OCH_2C = CH$	Ms Ma	fl tr
20	Ме	H			Ms V-	n
	Me	п Н	CH₂OMe	CH ₂ OCH ₂ CH ₂ CI	Мs	H
	Иe	n u	CH _z OMe	CHMeOH	Ms	H
	ne Me	H H	CH ₂ OMe	CHMeOMe	Ms	H
25		п	CH _z OMe	CHMeOMe	CI	H
	Me M-	H	CH₂0Me	CHMeOMe	MeS	H
	Ме	H	CH₂0Me	CHMeOMe	MeS0	Ħ
	Me	H	CH 20Me	CHMeOEt	Ms	H
	ile Ma	H	CH ₂ OMe	CHMeOCH = CH ₂	Ms	H
30	Me	H	. CH ₂ 0Me	CHMeOCH = CH ₂	Ms	H
	Ме	H	CH _z OMe	CHMeOCH ₂ CH = CH ₂	Ms	<u>H</u> .
	Ме	H	CH ₂ OMe	CHMeOCH _z C ≡ CH	Ms	H
	Иe	H	CH ₂ 0Me	CHMeOCH 2CH 2C1	Ms	H H H
	Иe	H	CH ₂ OMe	CMe = OH	Мs	H
35	Me	H	CH 20Me	CMe _z OMe	Ms	H
	Дe	H	CH ₂ OMe	CMe _z OE:	Ms	H -
	∄e	H	CH ₂ OMe	CH ₂ CH ₂ OMe	Ms	H
	Йe	H	CH ₂ OMe	CH ₂ CH ₂ OE t	Ms	H
40	Ме	H	CH₂OMe	CHEtOH	Ms	H :
40	Ме	H	CH₂0Me	CHE tOMe	Мs	H
	Ме	H	CH 20Me	CHE tOE t	Мs	H
	Йe	H	CH₂0Me	CH ₂ OCH ₂ CH ₂ OMe	Ms	H H
	Ме	H	CH = OMe	CHMeOCH 2CH 20Me	Ms	H
45	Me	· H	CH _z OMe	CH = NMe z	Ms.	H
	Мe	H	CH _z OMe	CHMeNMe _z	Ms	H
	Me '	H	CH ₂ OMe	CH _z CH _z NMe _z	Ms	H
	Me	H	CH_zOMe	CHzOCHzPh	2M	H

A	B	X	Y	Z	Q.
Ме	Ħ	CH ₂ OMe	CHMeOCH ₂ Ph	Иs	Н
Мe	H	CH _z OMe	CH ₂ OCH ₂ CO ₂ Me	Ms	Ħ H
Me	H	CH _z OMe	CH2OCH2CO2Et	Ms	$\widetilde{\mathtt{H}}$
Me	H	CH 20Me	eMs OSaMEOos KS	Ms	ਸ਼
Мe	H	CH _z OMe	CH ₂ CN	Иs	Ħ
Ме	Ħ	CH 20Me	CH _z SMe	Ms	H
Me	H	CH ₂ OMe	CH _z SE t	zń	ннинин
Me	H	CH = OMe	CH ₂ SOMe	Ms	n n
Me	H	eMC ₂ HO	CH ₂ SO ₂ Me	en 2K	T.
ме	H			ns Ms	n u
	П	CH ₂ OMe	CH ₂ SO ₂ Et		Π 11
Ме	H	CH _z OMe	CHMeSMe	Мs	П 17
Ме	H	CH 20Me	CHMeS0 _z Me	Иs	H
Мe	H H	CH₂OMe	CHzSCHzCHzOMe	Ms	H H
Ме	H	CH zOMe	CH ₂ OCOMe	Ms	H
Мe	H	CH ₂ 0Me	СЯМеОСОМе	Ms	H
Мe	H	CH₂0Me	CH 20S0 zMe	Ms	H H H
Ме	H	CH ≥OMe	CHMe0S0₂Me	Ms	H
Εt	H	CH ≥OMe	CH ₂ OH	Ms	H
Et	H	CH ₂ OMe	CH ₂ OMe	Ms	H
Εt	H	CH 20Me	CH ₂ OMe	Cì	H
Εt	H	CH 20Me	CH = OMe	MeS	H
Et	Ħ	CH ₂ OMe	CH₂0Me	MeS0	H
Et	Ĥ	· CH _z OMe	CH₂OEt	Ms	H
Et	Ĥ	CH _z 0Me	CH = OE t	C1	H
Et	H	CH 20Me	CH ₂ OEt	MeS	Ĥ.
Et	H	CH ₂ OMe	CH ₂ OE t	MeSO	H
Εċ	H	CH ₂ OMe	CH ₂ OPr-i	- Ms	H II
Et	H		CH ₂ OPr-a	Ms	n n
Et	n rr	CH ₂ OMe		ns Ms	II II
Έt	H	CH₂OMe	$CH_{2}OCH = CH_{2}$ $CH_{2}OCH_{2}CH_{2}$	ns Ms	ннннннннн
	H	CH₂OMe	CH ₂ OCH ₂ CH=CH ₂		H
Et	H	CH ≥0Me	· CH ₂ OCH ₂ C ≡ CH	zM -	n U
Et	H	CH₂0Me	CHzOCHzCHzC1	Ms u_	H
Εŧ	H	CH = OMe	СНМеОН	Ms.	H
Et	H	CH _≈ 0Me	CHMeOMe	Ms	H
Et	H	CH₂OMe	CHHeOHe	C1	H
Et	. Н	CH₂OMe	CHMeOMe	MeS	H H H
Et	H	CH zOMe	CHMe0Me	MeSO	H
Et ,	H	CH ₂ OMe	CHMeOE t	zĸ	H
Et 1	H	CH ₂ OMe	CHMeOCH = CHz	Ms	H
Et	H	CH ₂ OMe	CHMeOCH = CH2	Ms	H

	A	5	X	Y	Z	
5	Et	H	CH ₂ OMe	CHMeOCH ₂ CH = CH ₂	Ms	
	Et	Ħ	CH ₂ OMe	CHMeOCH aC ≡ CH	Ms	11 17
	Εċ	Ĥ	CH=OMe	CHMeOCH 2CH 2CI	ns Ms	. Н Н
	Εt	Ħ	CH 20Me	CMe _z OH	ris Ms	П 17
10	Ēŧ	Ĥ	CH _z OMe	CMe ₂ 0Me	ns Ms	H
	Et	Ħ	CH ₂ OMe	CMe _z OE:	Ms	n u
	Et	Ħ	CH ₂ OMe	CH _z CH _z OHe	ns Ms	- [] 17
	Et	H	CH ₂ OMe	CH ₂ CH ₂ OE t	ns Ms	n U
15	Et	H	CH ₂ OMe	CHE tOH	Ms	п
75	Et	Ħ	CH ₂ OMe	CHE tOMe	ns Ms	II.
	Εż	Ħ	CH ₂ OMe	CHE to Et	iis iis	n. U
	Ēŧ	Ä	CH ₂ OMe	CH ₂ OCH ₂ CH ₂ OMe	Ms	u u
	Et	Ĥ	CH _z OMe	CHMeOCH 2CH 2OMe	Ms	n n
20	Et	Ĥ	CH _z OMe	CHz:\Mez	Ms	ц 11
	Ēt	Ħ	CH _z OMe	CHMeNMe _z	Ms	H H H H H H H H H H H H H H H H H H H
	Et	H	CH ₂ OMe	CH ₂ CH ₂ NMe ₂	Ms	H
	Et	Ħ	CH ₂ OMe	CH ₂ OCH ₂ Ph	Ms	H
	Et	H	CH _z OMe	CHMeOCH ₂ Ph	- Ms	
25	Et	H H	CH ₂ OMe	CH=OCH=CO=Me	Ms	H
	Et	Ĥ	CH ₂ OMe	CH ₂ OCH ₂ CO ₂ Et	Ms	H
	Et	H	CH ₂ OMe	CHzOCHMeCOzMe	Ms	H
	Et	H	CH ₂ OMe	CH ₂ CN	Ms	H
30	Et	H	CH _z OMe	CH ₂ SMe	Мs	Ĥ
	Et	H	CH _z OMe	CH _z SE t	Ms	Ĥ
	Et	H	CH _z OMe	CH ₂ SOMe	Ms ·	Ĥ.
	Εt	Ħ	CH ₂ OMe	CH ₂ SO ₂ Me	Ms	H
	Εt	H	CH ₂ OMe	CH ₂ SO ₂ Et	Мs	H
35	Εt	H	CH ₂ OMe	CHMeSMe	Ms.	H
	Et	H	CH ₂ OMe	CHMeSOzMe	Ms	H
	Ēŧ	H	$CH_{2}OMe$	CH ₂ SCH ₂ CH ₂ OMe	Ms	H H
	Et	H	CH=OMe	CH ₂ OCOMe	Ms	H.
40	Et	H	$CH_{z}OMe$	CHMe0C0Me	Ms	H
40	Et	H	. CH=OMe	CH ₂ OSO ₂ Me	Мs	H
	Εt	H	CH _z OMe	CHMeOSO ₂ Me	Ms	H
	Pr-i	H	CH ₂ OMe	CH = OH	Ms	H
	P=-i	H	CH _z OMe	CH₂0Me	Ms	H H H
45	Pr-i	. Н	. CH _z OMe	CH₂OMe	CI	Η
	Pr-i	H	CH ₂ OMe	CH ₂ OMe	MeS	
	Pr-i/	H	CH 20Me	CH₂0Me	MeSO	H
	Pr-i	H	CH _z OMe	CH _z OE t	Ms	H

5	A	В	Х	Y	Z	Q.
3	Pr-i	H	CH 20Me	CH ₂ OE t	C1	H
	Pr-i	Ħ	CH _z OMe	CH ₂ OE t	МеS	Ħ
	Pr-i	H	CH ₂ OMe	CH ₂ 0Et	MeSO	
	Pr-i	H	CH _z OMe	CH _z OPr-i	Ms	Ħ
10	Pr-i	Ĥ	CH ₂ OMe	CH ₂ OPr-n	Ms .	. Ħ
	Pr-i	Ħ	CH ₂ OMe	$CH_2OCH = CH_2$	Ms	H
	Pr-i	H	CH _z OMe	$CH_2OCH_2CH=CH_2$	zK	Ħ
	Pr-i	Ħ	CH ₂ OMe	CH ₂ OCH ₂ C ≡ CH	zK zK	Ħ
	P=-i	H	CH ₂ OMe	CH2OCH2CH2CI	Жs	ਸ਼ੌ
15	Pr-i	Ĥ	CH _z OMe	CHMeOH	Ms	. .
	P r -i	Ħ	CH ₂ OMe	СНМеОМе	Ms	Ħ
	Pr-i	Ħ	CH ₂ OMe	CHMe0Me	C1	Ħ
	Pr-i	Ħ	CH ₂ OMe	СНМеЭМе	MeS	Ĥ
20	Pr-i	Ħ	CH ₂ OMe	CHMe0Me	MeS0	Ħ
	P r -i	Ħ	CH ₂ OMe	CHMeOEt	Ms	Ħ
	P r -i	Ĥ	CH _z OMe	CHMeOCH = CH ₂	Ms	H
	Pr-i	Ħ	CH _z OMe	CHMeOCH = CH ₂	Ms	H
	Pr-i	Ë	CH₂OMe	CHMeOCHzCH = CHz	Иs	H H
25	Pr-i	Ħ	CH₂OMe	CHMeOCH ₂ C≡CH	Ms	H
	Pr-i	Ħ	CH₂OMe	CHMeOCH zCH zCI	Ms	H H H
	Pr-i	Ĥ	CH 20Me	CMe = OH	Ms	Н
	Pr-i	H	CH ₂ OMe	CMe ₂ OMe	Ms	H
30	Pr-i	H	. CHzOMe	CMe _z OEt	Ms	H H
30	Pr-i	H	CH _z OMe	CH ₂ CH ₂ OMe	2K	H
	Pr-i	H	CH zOMe	CH ₂ CH ₂ OEt	Ms	H
	Pr-i	H	CH ₂ OMe	CHE tOH	Ms	H ·
	Pr-i	H	CH = OMe	CHE tOMe	Мs	H
35	Pr-i	H	CH ₂ OMe	CHE tOE t	Мs	H
	Pr-i	H	CH=OMe	CHzOCHzCHzOMe	Мs	H
	²Pr-i	H	CH _z OMe	$CHMeOCH_{z}CH_{z}OMe$	Ms	H H H H
	Pr-i	Н .	CH _z OMe	CH 2NMez	Ms	H
40	Pr-i	H	CH ₂ OMe	CHMeNMe z	Мs	H H
40	Pr-i	H	CH ₂ OMe	CH 2CH 2HMe 2	Ms	H
	Pr-i	H	CH _z OMe	CH 20CH 2Ph	Ms	Н
	Pr-i	H	CH _z OMe	CHMeOCH ₂ Ph	Мs	H H H
	Pr-i	H	CH ₂ OMe	CH = OCH = CO = Me	Ms	Ħ
45	Pr-i	H	CH ₂ OMe	CH zOCH zCO zE t	Ms .	H
	Pr-i	. Н	CH _z OMe	CH z OCHMeCO z Me	Ms	ti rr
	Pr-i'	H	CH _z OMe -	CH zCN	Ms	H H
	Pr-i	H	CH ₂ OMe	CH ₂ SMe	Ms	n

0 282 944

	A.	5	X	Y	Z	Q
5	Pr-i	H	CH ₂ OMe	CH ₂ SE t	Мs	E
	Pr-i	H	CH₂OMe	.CH ₂ SOMe	Ms	H
	Pr-i	H	CH z OMe	CH ₂ SO ₂ Me	Ms	H
10	Pr-i	H	CH _z OMe	CH ₂ SO ₂ Et	Ms	H
	Pr-i	H	CH _z OMe	CHMeSMe	Ms	Ĥ
,,	Pr-i	H	CH ₂ OMe	CHMeSO _z Me	Ms	H
	Pr-i	H	CH ₂ OMe	CHzSCHzCHzOMe	Ms	$ar{\mathtt{H}}$
	Pr-i	H	CH ₂ OMe	CH ₂ OCOMe	Ms	H
	Pr-i	H	CH ₂ OMe	CHMe0C0Me	Ms	H
15	Pr-i	H	CH _z OMe	CH=OSO=Me	Ms	Ħ
	Pr-i	H	CH ₂ OMe	CHMeOSO _z He	Ms	Ħ

5	A	E	X	Y	Z	હ
·	Me	Ме	CH=OMe	CH ₂ OH	Иs	H
	Ме	Me	CH ₂ OMe	CH ₂ OMe	Νs	Ħ
	Me	Мe	CH = OMe	CH ₂ OMe	Cl	H
	Мe	Иe	CH = OMe	CH ₂ OMe	MeS	H
10	Мe	Йe	CH=OMe	CH ₂ OMe	MeSO	H
	Me	Мe	CH _z OMe	CHaOEt	Ms	H
	Ие	Мe	CH=OMe	CH ₂ OE t	Cl	H
	Me	Me	CH _z OMe	CH=OE t	MeS	H
15	Мe	Нe	CH _z OMe	CHaOEt	MeS0	H
	Мe	Me	CH ₂ OMe	CH _z OPr-i	Ms	H
	Ме	Мe	CH ₂ OMe	CH ₂ OP _T -n	Ms	H
	Me	Me	CH _z OMe	$CH_zOCH = CH_z$	Ms	Ħ
	Me	Мe	CH ₂ OMe	CH = OCH = CH = CH =	2M	H
20	Иe	Мe	CH ₂ OMe	CH ₂ OCH ₂ C ≡ CH	Ms	H
	Мe	Мe	CH ₂ OMe	CH=OCH=CH=C1	Ms	H
	Мe	Мe	CH=0Me	СНИеОН	Иs	H
	Me	Me	CH _z OMe	.CHMe0Me	Ms	H
25	Me	Me	CH ₂ OMe	CHMe0Me	C 1	
25	Me	Мe	CH _z OMe	CHMe0Me	MeS	H
	Me	Me	CH=0Me	CHMeOMe	MeSO	H
	Me	Me	CH ₂ OMe	CHMeOEt	Ms	H
	Me	Мe	CH ≈0Me	CH _z CH _z OMe	Ms	Н
30	Мe	Мe	CH ₂ OMe	CH2CH2OEt	Ms	H
	Мe	ਰੀe	CH ₂ OMe	CHE =OH	Иs	H
	Мe	Ме 🗀	CH ₂ OMe	CHE tOMe	Ms	H
	Мe	Мe	CH ≥0Me	CHEtOEt	Ms	H
0.2	Мe	Мe	CH 20Me	CH ₂ OCH ₂ CH ₂ OMe	Ms.	H
35	Мe	Мe	CH = OMe	CH:NMe:	Мs	n
	Мe	Мe	CH₂0Me	CH2OCH2Ph	Ms	H.
	Мe	Иe	CH=0Me	CH = OCH = CO = Me	Ms	п
	Мe	Мe	CH _z OMe	CH2OCH2CO2Et	Ms U	n u
40	Мe	Иe	CH=OMe	CH2OCHMeCO2Me	Ms Ma	n u
	Мe	Мe	CH ₂ 0Me	CH ₂ CN	Мs	n u
	Мe	Ме	CH ₂ OMe	CH=SMe	Ms V-	ti ti
	Me	Ме	CH₂0Me	CH _z SEt	ZK He	H H H
	Мe	. Me	CH ₂ OMe	CH _z SO _z Me	Ms Ma	n U
45	Мe	Me	CH₂0Me	CH _z SO _z Et	Ms .	n H
	Мe	Me	CH 20Me	CHzSCHzCHzOMe	Ms .	H
	Me 1	Ме	CH ₂ OMe	CH ₂ OCOMe	Ms M-	H
	Me·	Me	CH _z ∂Me	CHMe0C0Me	Ms	<u> </u>

5	A	2	Х	Y	Z	Ę,
J	Me	Ме	CH ₂ 0Me	CH _z OSO _z Me	Иs	H ·
	Мe	Me	CH ₂ 0Me	CHMeOSO ₂ Me	Ms	Ħ
	Εt	Мe	CH = OMe	CH = OH	Жs	H
	Εt	Ме	CH ₂ 0Me	CH 20Me	Ms	Ħ
10	Εt	Мe	CH _z OMe	CH _z OMe	CI	Ĥ
	Εt	Ие	CH = OMe	CH ₂ OMe	MeS	Ĥ
	Εċ	Ме	CH₂0Me	CH=OMe	MeSO	Ĥ
	Et	Me	eMC=HO	CH _z OE t	Ms	H
15	Εt	Хe	CH=0Me	CH _c OEt	Cl	Ħ
	Et	Ме	CH = OMe	CH _z OE t	MeS	H
	Et	Мe	CH₂0Me	CH ₂ OE t	MeSO	H
	Et	Me	CH zOMe	CH ₂ OPr-i	Мs	H
	Et	Мe	CH 20Me	CH ₂ OPr-n	Ms	H
20	Εt	Иe	CH 20Me	$CH_zOCH = CH_z$	Ms	H H H H H H H H H H H H H H H H H H H
	Et	Мe	CH 20Me	$CH_2OCH_2CH = CH_2$	2K	H
	Et	Иe	CH ₂0Me	CH ₂ OCH ₂ C ≡CH	Ms	H
	Εţ	Ме	CH _z OMe	CHzOCHzCHzC1	ds	H
25	Εŧ	Ме	CH = OMe	СНМеОН	Ms ·	Н
23	Et	Мe	CH₂OMe	CHMe0Me	ds	H
	Ξt	Иe	CH 20Me	CHMeOMe	C1	H
	Et	Иe	CH =OMe	CHMeOMe	MeS	H
	Et	Мe	CH ₂ OMe	CHMeOMe	MeS0	H H H
30	£t	Йe	CH zOMe	CHMeOEt	Ms	H
	Et	Йe	CH ₂ OMe	CH ₂ CH ₂ OMe	Ms	H
	Et	Ме	CH₂OMe	CH ₂ CH ₂ OEt	Ms	H
	Et	Ме	CH₂0Me	CHE tOH	Ms	H
05	Et	Ме	CH zOMe	CHE tOMe	дs	H
35	Et	Ме	CH₂OMe	CHEtOEt	Жs	H
	Et	Йe	- CH₂OMe	CH2OCH2CH2OMe	Ms	H
	£ŧ	Йe	CH 20Me	CH2::Me2	Мs	H
	Et	Ме	CH₂0Me	CH ₂ OCH ₂ Ph	Мs	H
40	Et	Ме	CH ₂ OMe	CH ₂ OCH ₂ CO ₂ Me	Ms	H.
	Et	Ме	CH = OMe	CH ₂ OCH ₂ CO ₂ Et	ăs Hs	H
	Et	Ме	CH ₂ OMe	CH ₂ OCHMeCO ₂ Me	Мs	H
	Et	Йe	CH 20Me	CH ₂ CN	ĭs u_	H
	Et	Нe	CH = OMe	CH ₂ SMe	ils V-	H
45	:33	'Me	CH₂OHe	CH ₂ SE t	Ms u_	H ·
	Et	Me	CH₂OMe	CH SO F	zK -	п Н
	Et :	Ме	CH ₂ OMe	CH SCY CY ON-	Ms Ms	n H
	<u> </u>	Me	CH 20Me	CH2SCH2CH2OMe	เเร	

	A	Е	Х	Y	Z	Ç.
5	Et	Ме	CH ₂ OMe	CH=0COMe	Мs	Ħ
	E	Иe	CH ₂ OMe	CHMeOCOMe	Ms	ਸ
	Et	Ме	CH₂OMe	CH ₂ OSO ₂ Me	zĸ	Ħ
	Et	Ме	CH ₂ OMe	CHMeOSO zHe	Ms	Ħ
10	Pr-i	Me	CH ₂ OMe	CH ₂ OH	Ms	H
	Pr-i	Ме	CH ₂ OMe	CH ₂ 0Me	Ms	H
	Pr-i	Ме	CH ₂ OMe	CH ₂ 0Me	CI	Ħ
	P - -i	Иe	CH ₂ OMe	CH ₂ 0Me	MeS	Ħ
	Pr-i	Ме	CH ₂ OMe	CH ₂ OMe	MeSO	Ħ
15	P r -i	Ме	CH _z OMe	CH ₂ 0E t	Ms	Ħ
	Pr-i	Ме	CH ₂ OMe	CH ₂ 0E t	CI	ਸ
	Pr-i	Me	CH ₂ OMe	CH ₂ OE t	MeS	Ħ
	Pr-i	Ме	CH ₂ OMe	CH ₂ OE t	MeSO	Ħ
20	Pr-i	Me	CH ₂ OMe	CH _z OPr-i	Ms.	Ħ
-0	Pr-i	Иe	CH ₂ OMe	CH ₂ OP _T -n	Ms.	Ħ
	Pr-i	Ме	CH _z OMe	$CH_2OCH = CH_2$	Ms	ਸ਼
	Pr-i	Ме	CH ₂ OMe	$CH_{2}OCH_{2}CH = CH_{2}$	Ms	Ħ
	P r -i	Ме	CH ₂ OMe	$CH_2OCH_2CH = CH$	Ns -	អ៊
25	Pr-i	Ме	CH ₂ OMe	CH ₂ OCH ₂ CH ₂ Cl	Ms	Ħ
	Pr-i	Me	CH _z OMe	CHMeOH	Ms .	ннинининниннининнинининнинининининини
	Pr-i	Ме	CH _z OMe	CHMeOMe	Ms	Ħ
	Pr-i	Ме	CH ₂ OMe	CHMe0Me	CI	Ħ
	P r -i	lle	CH _z OMe	СНИеОМе	MeS	H
30	Pr-i	Ме	CH ₂ OMe	CHMeOMe	MeSO	Ħ
	Pr-i	Ме	CH ₂ OMe	CHMeOEt	Ms	H
	Pr-i	Ме	CH ₂ OMe	CH ₂ CH ₂ OMe	Ms	H
	P . - i	Ме	CH ₂ OMe	CH ₂ CH ₂ OE t	Мs	H
35	Pr-i	Ме	CH₂0Me	CHE tOH	Ms	H
	P r -i	Мe	CH₂0Me	CHE tOMe	Мs	H
	Pr-i	Мe	CH ₂ OMe	CHEtOEt	Ms	H
	Pr-i	Мe	CH₂OMe	CH2OCH2CH2OMe	Жs	H
	Pr-i	Мe	CH _z OMe	CHzNMez	Мs	H
40	Pr-i	Мe	CH _z OMe	CH 20CH 2Ph	ar.	Н .
	Pr-i	Мe	CH _z OMe	CH ₂ OCH ₂ CO ₂ Me	гĸ	
	Pr-i	Мe	CH ₂ OMe	CH20CH2CO2Et	zК	H
	P r -i	Ме	CH _z OMe	CH z OCHMeCO z He	Мs	H H H H
45	Pr-i	Мe	CH ₂ OMe	CH ₂ CN	Ms	H
70	Pi	Мe	CH=OMe	CH _z SMe	Ms	Ħ
	Pr-i ·	Me	CH _z OMe	CH ₂ SE t	Иs	H
	Pr-i	Me	CH 20Me	CH _z SO _z Me	zr	H .
		 				

0 282 944

A	E	X	Y	Z	G.
Pr-i	Ме	CH _z OMe	CHzSOzēt	Ms	Н
Pr-i	Иe	CH ₂ OMe	CH ₂ SCH ₂ CH ₂ OMe	Ms	H
Pr-i	Мe	CH ₂ OMe	CH 20COMe	Ms	Ĥ
Pr-i	Иe	CH _z OMe	CHMeOCOMe	Ms	H
Pr-i	Хe	CH ₂ OMe	CH ₂ OSO ₂ Me	Ms	H
Pr-i	Мe	CH ₂ OMe	CHMeOSOzMe	Ms	H

A	В	X	Y	Z	Q.
Me	H	Pr-i	CH _z OMe	ils	H
Me	Ä	Pr-i	CH ₂ OEt	Ms	H
Ме	Ħ	Pr-i	CHMe0Me	Ms	H
Ме	Ĥ	Pr-i	CHMeOEt	Ms	H
Me	H	Pr-i	CHE tOMe	Ms	Н Н Н Н
Me	H	Pr-i	CHE tOE t	Ms	H
Иe	H	P r -i	CH ₂ Sile	Ms	H
Ме	H	Pr-i	CH ₂ SE t	Ms	H
Ме	H	P r -i	CH ₂ SO ₂ Me	Ms	H
Me	H	Pr-i	CH ₂ OCOMe	Ms	Ħ
Ме	H	P r -i	CHMe0C0Me	Ms	H
Me	H	Pr-i	CH _z OSO _z Me	Ms	Ħ
	Ħ	Pr-i	CHMeOSO _z Me	zM	H
Me Et	n H	Pr-i	CH ₂ 0He	en en	ннининниннин
	H	Pr-i	CH ₂ OEt	Ms	H .
Et Et	и Н	Pr-i	CHMeOMe	Ms	Ħ
	н		CHMeOEt	Ms	Ĥ
Et		Pr-i	CHE tOMe	Ms	Ĥ
Et	H	Pr-i	CHE torie	Ms	H
Et	H	Pr-i		ns Ns	й
Et	H	Pr-i	CH ₂ SMe	Ms	
Et	H	Pr-i	CH ₂ SEt	ris Ms	n II
Et	H	Pr-i	CH ₂ SO ₂ Ye	ns Ms	11
Et	H	· Pr-i	CH ₂ OCOMe		11
Et	H	Pr-i	CHMe0C0Me	Ms · w_	n T
Et	H	Pr-i	CH ₂ OSO ₂ Me	· Ms	<u>п</u>
Et	H	Pr-i	CHMeOSO ₂ Me	Ms M-	ជ
Pr-i	H	Pr-i	CH₂OMe	Ms J-	П.
Pr-i	H	Pr-i	CH ₂ OEt	Ms V-	n n
Pŗ-i	H	Pr-i	CHMe0Me	Ms V-	n u
Pr-i	H	Pr-i	CHMeOE t	Ms	<u>п</u>
Pr-i	H	Pr-i	CHE tOMe	Ms.	n IT
Pr-i	H	Pr-i	CHEtOEt	Ms	n n
Pr-i	H	Pr−i	CH ₂ SMe	Ms	n
Pr-i	H	P r −i	CH ₂ SEt	Ms	
Pr-i	H	Pr-i	CH ₂ SO ₂ Me	Ms	n
Pr-i	H	Pr-i	CH₂0C0Me	Ms	H
Pr-i	. Н	Pr-i	CHMe0C0Me	ils	H
Pr-i	H	Pr-i	CH ₂ OSO ₂ Me	Ms	Ħ
Pr-i	H	Pr-i	CHMeOSO₂Me	ns .	H H H H
Me	Me	Pr-i	CH ₂ OMe	Ms	H

		•				•
5	A .	В	Х	Y	Z	Q
-	Ме	Ме	Pr-i	CH ₂ OEt	Ms	H
	Мe	Me	Pr-i	CHMeOMe	Ms	H
	Me	Ме	Pr-i	CHMeOE t	Ms	H H H H H H H H H
10	Me	Me	Pr-i	CH ₂ SMe	Ms	H
10	Мe	Мe	P r -i	CH ₂ SO ₂ Me	Ms	H
	Et	Ме	Pr-i	CH₂OMe	Ms	H
	Et	Me	Pr-i	CH ₂ OEt	Ms	H
	Et	Мe	Pr-i	CHMeOMe	Ms	H
15	Et	Me	Pr-i	CHMeOE t	Ms	H
	Et	Ме	Pr-i	CH ₂ SMe	Ms	H
	Et	Ме	Pr-i	CH ₂ SO ₂ Me	Ms	H
	Pr-i	Мe	Pr-i	CH z OMe	Ms	H
	Pr-i	Me	Pr-i	CH ₂ OE t	Ms	H
20	Pr-i	Ме	Pr-i	CHMeOMe	Ms	H
	Pr-i -	Me	Pr-i	CHMeOE t	Ms	Н
	Pr-i	Me	Pr-i	CH₂SMe	Ms	H
	Pr-i	Ме	Pr-i	CH ₂ SO ₂ Me	Ms	H
25	Me	H	F.	CH ₂ OMe	Ms	H
25	Me	H	F	CH ₂ OEt	Ms	H
	Me	H	F	CHMeOMe	Ms	H
	Et	H	F	CH ₂ OMe	Ms	H
	Et	H	F	CH ₂ OEt	Ms	H
30	Et	H	. F	CHMe0Me	Мs	H
	Et	H	F	CHMeOE t	Ms	H
	Pr-i	H	. F	CH _z OMe	Ms	H
	Pr-i	H	.F F	CH ₂ OEt	Ms	H
	Pr-i	H		CHMeOMe	Яs	H
35	Мe	Ме	F	CH₂OMe	Ms	H
	Me	Иe	F	CH _z OEt	Ms	H ·
	Ēt	Me	F	CH₂OMe	Ms	H
	Et	Мe	F	CH ₂ OE t	Ms	H H
40	Εť	Мe	F	CHMeOMe	Ms	H
40	Pr-i	Me	F	CH _z OMe	Ms	H
	Pr-i	Ме	F	CH _z OE t	Ms	H
	Me	H	NOz	CH ₂ OMe	Ms	H
	Me ·	H	NOz	CH ₂ OE t	Ms .	H
45	Me	' H	NOz	CHMe0Me	Ms	H H H
	Et	H	NO2	CH _z OMe	Ms	H ·
	Et '	H	NOz	CH ₂ OEt	Ms	H
	Et	H	NOz	CHMe0Me	Ms	H

5	A	В	X	Y	Z	Ę.
J	Εċ	H	NOz	CRMeOEt	Иs	H
	Pr-i	Ħ	NOz	CH ₂ OMe	Ms	
	Pr-i	H	NOz	CH ₂ OEt	Ms	Ħ
	Pr-i	H	NO ₂	CHMeOMe	Ms	Ĥ
10	Me	Мe	NOz	CH₂0Me	Ms	ਜ
	Иe	Ме	NOz	CH ₂ OEt	Ms	Ħ
	Et	Мe	NO ₂	CH ₂ OMe	ar Ms	Ħ
	Et	Ме	NOz	CH ₂ OEt	Ms	H
	Ē٤	Ме	NO ₂	CHMeOMe	Ms	Ħ
15	Pr-i	Мe	NO ₂	CH₂0Me	Ns 2K	H
	Pr-i	Мe	NOz	CH ₂ OEt	zK	H H
	Me	H	CF ₃	CH ₂ OMe	Ms	Ħ
	Me	Ħ	CF ₃	CH ₂ OE t	Ms	Ħ
20	Ме	H	CF:	CHMeOMe	ar Sis	H
	Et	H	CF ₃	CH ₂ OMe	iis Ms	H
	Et	H	CF ₃	CH ₂ OE t	Ns	11
	Et	H	CF ₃	CHMeOMe	iis ZK	H.
	Et	H	CF ₃	CHMeOEt	Ms	H
25	Pr-i	H	CF ₃	CH ₂ OMe	Ms	H H
	Pr-i	H	CF ₃	CH ₂ OEt	ns Ns	H II
	Pr-i	H	CF ₃	CHMeOMe	Ms	п.
	Me	Ме	CF ₃	CH ₂ OMe	ns Ms	17
	Me	Ме	· CF ₃	CH ₂ OEt	ns Ms	Ω, 17
30	Et	ne Me	CF ₃	CH ₂ OMe	ns Ms	n II
	Et	Me .	CF ₃	CH ₂ OEt	Ms	11
	Et	ne . Me	CF ₃	CHMeOMe	ns Ms	<u></u>
	Pr-i	ne Me	CF ₃	CH ₂ OMe	ns Ms	Ω. 17
25	Pr-i		CF₃ CF₃		Ms	u.
35	Me	Me H	COCH ₃	CH ₂ OEt	ns Ms	11 17
	ne Ne	п Н		CH ₂ OMe CH ₂ OEt	ns Ms	17
	Et		COCH			n.
		H	COCH3	CH ₂ OMe	Ms Ma	17
40	Et .	H	COCH ³	CH ₂ OEt	Ms Ma	17
-	Et	H	COCH ³	CHMeOMe	Ms	Д 17
	Pr-i	H	COCH	CH ₂ OMe	Ms u	
	Pr-i	H	COCH 3	CH ₂ OEt	ils V	H H H H
	Me	Йe	COCH ₃	CH _z OMe	Мs	H
45	Et	· Me	COCH ₃	CH ₂ OMe	Ms ·	H
	Et	Ме	COCH ₃	CH ₂ OEt	Ms	Ħ
	Pr-i '	Me	COCH3	CH _z OMe	Ms	Ħ
	Me ·	Н .	SCH3	CH _z OMe	Ms	H

						
5	A	В	Х	Y	·Z	Q.
	Ме	H	SCHz	CH _z OE t	Ms	H
	Et	H	SCH ₃	CH ₂ OMe	Ms	Ħ
	Εt	H	SCH3	CH ₂ OE t	ar.	h H
10	Et	H	SCH3	CHMeOEt	Ms	H H H H H H H H H H H H
10	Pr-i	H	SCH ₃	CH₂0Me	Ms Ms	<u>и</u> .
	Me	Йе	SCH ₃	CH₂OMe	Ms	T.
	Et	Иe	SCH ₃	CH ₂ OMe	iis IIs	П nt
	Et	Ме	SCH ₃	CH ₂ OE t	ins Ms	П IT
15	Pr-i	Иe	SCH ₃	CH ₂ OMe		n T
7.5	Me	H	OCHF ₂	CH ₂ OMe	Ms	H
	Me	H 'I	OCHE 2		Ms .	H
	Et		OCHF 2	CH ₂ OE t	Мs	H
		H	OCHF z	CH ₂ OMe	Ms	H
20	Et	H	OCHF ₂	CH ₂ OE t	Ms	H .
	Et	H	OCHF ₂	CHMeOE t	Ms	H
	Pr-i	H	OCHF 2	CH ₂ OMe	Мs	H
	Pr-i	H	OCHF 2	CH ₂ OE t	Ms	H
	Ме	Йe	OCHF ₂	CH₂0Me	Ms	· H · · · · ·
25	Me	Ме	OCHF ₂	CH ₂ OE t	Ms	H
	Et	Me	OCHF ₂	CH₂0Me	Ms	H
	Et	Ме	OCHF _z	CH _z OEt	Ms	H
	Pr-i	Мe	OCHF ₂	CH ₂ OMe	Ms	H
	Pr-i	Мe	OCHF _z	CH ₂ OE t	Ms	H H
30	Мe	H	OCF 3	CH ₂ OMe	Ms	Ħ
	Ме	H	OCF ₃	CH ₂ OE t	Ms	Ĥ
	Et	H	OCF 3	CH ₂ OMe	Ms	Ĥ
	Et	H	OCF ₃	CH ₂ OE t	Ms	Ħ
	Et	H	OCF ₃	CHMeOEt	г	Ħ
35	Pr-i	Ħ	OCF ₃	CH ₂ OMe	Ms	Ħ
	Pr-i	H	OCF ₃	CH ₂ OE t	Мs	H H
	Me	Йe	OCF ₃	CH ₂ OMe	Ms	H .
	Eŧ	Ме	OCF ₃	CH ₂ OMe	Ms	H H
	Et	Ме	OCF ₃	CH ₂ OE t	Ms	Ħ
40	Pr-i	Иe	OCF ₃	CH ₂ OMe	Ms	H
	Me	H		CH ₂ OMe		H
	Et		CH _z SMe		Ms V-	
	Et	. Н	CH₂SMe	CH ₂ OMe	Ms .	H
45	Et	T II	CH _z SMe	CH ₂ OEt	Ms V-	H
45		H .	CH₂SMe	CHMeOE t	Ms ·	H
	Pr-i	H	CH₂SMe	CH ₂ OMe	Ms	H -
	Pr-i	H	CH ₂ SMe	CHMeOMe	Ms	H
	Me .	Me	CH ₂ SMe	CH _z OMe	Ms	H

5	A	В	Х	Y	Z	Q
•	Et	Ме	CH₂SMe	CH ₂ OMe	Ms	H
	Et	Иe	CH ₂ SMe	CH ₂ OE t	Ms	Ħ
	Pr-i	Мe	CH ₂ SMe	CH ₂ OMe	Ms	Ĥ
	Me	H	CN	CH ₂ OMe	Ms	H
10	Et	Н	CN	CH₂0Me	Иs	H
	Et	H	CN	CH ₂ OE t	Ms	Ĥ
	Pr-i	H	CN	CH ₂ OMe	Иs	H
	Me	Мe	CN	CH ₂ OMe	Ms.	Ĥ
15	Et	Мe	CN	CH ₂ OMe	Иs	H H
, 3	Pr-i	Me	СИ	CH ₂ OMe	Z. S. S. S. S. S. S. S. S. S. S. S. S. S.	Ä
	Me	H	CO _z Me	CH ₂ OMe	Мs	H H
	Et	H	CO₂ĭe	CH₂0Me	Ms	ਸ਼ੇ
	Et	H	COzile	CH ₂ OE t	Ms	Ĥ
20	Pr-i	H	COzMe	CH ₂ OMe	Ms	H H H
	Me	Йe	C0 ₂ Me	CH ₂ OMe-	Ms	Ĥ
	Et	Мe	COzMe	CH ₂ OMe	Ms ·	Ä
	Pr-i	Мe	COzrie	CH ₂ OMe	Ms	
	Ме	H	CONMez	CH ₂ OMe	Ms	H H · · ·
25	Et	Ħ	CONMez	CH ₂ OMe	Йs	Ħ
	Pr-i	Ħ	CONMez	CH ₂ OMe	Ms	Ħ
	Me	H	Me	CH ₂ OMe	NO ₂	H H H
	Me	Ħ	Me	CH ₂ OEt	NO ₂	Ħ
	Et	Ĥ	Me	CH ₂ OMe	NO ₂	ij
30	Et	Ħ	. Ne Ne	CH ₂ OEt	NO ₂	H H
	Et	H	Ме	CHMeOMe	NO ₂	H
	Pr-i	H	Ме	CH ₂ OMe	NO ₂	Ħ
	Pr-i	Ħ	Ме	CH ₂ OE t	NO _z	H
35	Me	Ħ	C1	CH ₂ OMe	NOz	H H
	Ме	H	. ČĪ	CH ₂ OE t	NO _z	Ħ
	Et	Ħ	CI	CH ₂ OMe	NO ₂	Ĥ
	Eŧ	H	Cl	CH ₂ OE t	NOz	H
	Et	H	CI	CHMeOMe	NOz	Ħ
40	Pr-i	H	ci	CH _z OMe	NOz	H
	Pr-i	Ħ	Ci	CH ₂ OEt	NO ₂	H
	Ме	Йe	Me	CH₂0Me	NO ₂	Ë
	Et	. Me	Иe	CH ₂ OMe	NO ₂	H
	Et	Ме	Ме	CH ₂ OEt	NO ₂	H
45	Pr-i	Me	Me	CH ₂ OMe	NO ₂	Ħ
	Me ·	Ме	CI	CH ₂ OMe	NO ₂	H
	Et ·	Ме	C1	CH ₂ OMe	NO ₂	H
			· · · · · · · · · · · · · · · · · · ·	A11 COLLO	1102	

	\overline{A}	В	X	Y	Z	୍
5	Et	Ме	C1	CH ₂ OE t	NO ₂	
	Et	Me	Cl	СНМеОМе	NO ₂	H H
	Pr-i Me	Ме Н	Cl Me	CH _z OMe CH ₂ OMe	No ≥ CF 3	H
10	Ме	H	Ме	CH ₂ OE t	CF ₃	H H H
	Et Et	H H	Ме	CH ₂ OMe	CF₃	H
	Et	H	Me Me	CH₂OEt CHMeOMe	CF₃ CF₃	H H
15	Pr-i	H	Ме	CH₂OMe	CF ₃	H
	P r -i Me	H H	Me Cl	CH₂OEt CH₂OMe	CF ₃ CF ₃	H
	Me	H	C1	CH ₂ OE t	CF ₃	H H H H
20	Et Et	H H	CI Cl	CH₂OMe CH₂OEt	CF ₃ CF ₃	H :
	Et	H	C1	CHMe0Me	CF ₃	H
	Pr-i Pr-i	H H	CI Cl	CH₂OMe CH₂OEt	CF ₃	H
25	Me	Мe	Me	CH ₂ OMe	CF ₃ CF ₃	. H
23	Et Et	Ме Ме	Me Me	CH ₂ OMe CH ₂ OEt	CF ₃	H H
	Pr-i	Мe	ne Me	CH ₂ OMe	CF ₃ CF ₃	п Н
	Me Et	Me Me	C1	CH₂OMe	CF₃	H H
30	Et	ne Me	- Cl Cl	CH ₂ OMe CH ₂ OEt	CF ₃ CF ₃	H H
	Et	Ме	C1	CHMe0Me	CF₃	H
	Pr-i Me	Me H	CI Me	CH2OMe CH2OMe	CF ₃ CN	H H
35	Me	H	Мe	CH ₂ OEt	CN .	H
	Et Et	H H	Me Me	CH₂OMe CH₂OEt	CN CN	H H
	Et	H	Me	CHMe0Me	CN	H
40	Pr-i Pr-i	H H	Me Me	CH ₂ OMe CH ₂ OE t	CN CN	H H
	Ме	H	C1	CH₂OMe	CN	H
	Me Et	H H	C1 Cl	CH2OEt CH2OMe	CN CN	Н Н Н
45	Et	Ĥ	C1	CH ₂ OEt	CN	H .
	Et Pr-i '	H H H H	Cl Cl	CHMe0Me CH₂OMe	CN CN	H ·
	Pr-i	H	C1	CH ₂ OE t	CN CV	H ,

	A	В	X	Y	Z	Q
5	Me	Ме	Ме	CH₂OMe	CN	n n
	Et	Me	Ме	CH ₂ OMe	CN	H H H H H H H H H H H H H H H H H H H
	Et	Мe	Ме	CH ₂ OE t	CN	H.
	Pr-i	Мe	Йe	CH ₂ OMe	CN	ਸ
10	Me	Мe	C1	CH ₂ 0Me	CN	Ħ -
	Et	Мe	C1	CH ₂ OMe	CN	Ħ
	Et	Мe	C1	CH ₂ OE t	CN	Ħ
	Et	Ме	CI	CHMe0Me	CN	H
	Pr-i	Мe	· C1	CH₂OMe	CA	H
15	Ме	H	Ме	CH₂0Me	0Me	H
	Me	H	Ме	CH ₂ OEt · ·	0Me	H
	Et	H	Мe	CH₂0Me	0Me	H
	Et	H	Ме	CH ₂ OEt	0Me	H
20	Et	H	Иe	CHMeOMe	0Me	Ħ ·
	Pr-i	H	Ие	CH ₂ OMe	0Me	H
	Pr-i	H	Иe	CH ₂ OE t	0Me	H
	Me	H	C1	CH ₂ OMe	0Me	H
	Me	H	CI	CH ₂ OE t	0Me	H
25	Et	H	Cl	CH ₂ OMe	OMe OME	H
	Et Et	H H	CI	CH ₂ OEt	OMe	H
	Pr-i	n H	C1	CHMeOMe	OMe OMe	H H
	Pr-i	п Н	C1 . C1	CH ₂ OMe CH ₂ OEt	one OMe	п Н
30	Me	n Me	. di Me	CH ₂ OMe	OMe	H
	Et	Me	Ие	CH ₂ OMe	0Me	Ħ
	Et	Ме	Ме	CH ₂ OE t	0Me	Ħ
	Pr-i	Жe	Иe	CH ₂ OMe	0Me	Ĥ
05	Me	Мe	CI	CH ₂ OMe	0Me	• Н
35	Et	Йe	C1	CH₂0Me	0Me	H
	Et	Мe	C1	CH ₂ OE t	0Me	H
	Eŧ	Мe	Cl	CHMe0Me	0Me	H
	Pr-i	Йe	C1	CH₂OMe	0Me	H
40	Me	H	Иe	CH₂0Me	Br	H
	Мe	H	Ме	CH ₂ OEt	Br	H ·
	Eż	H	Иe	CH ₂ OMe	Br	H
	Et	H	Me	CH ₂ OE t	Br	H H
45	Et	·H	Иe	CHMe0Me	Br	H
40	Pr-i	H .	Me	CH ₂ OMe	Br	H TT
	Pr-i	H	Me C1	CH ₂ OEt	Br o_	. Н . Н Н
	Me ·	H	C1	CH ₂ OMe	Br .	<u> </u>

5	A	Б	X	Y	Z	Ç.
J	Me	Ħ	CI	CH ₂ OE t	Br	H
	Et	Ħ	CI	CH ₂ OMe	Br	Ħ
	Εt	H	C1	CH ₂ OE t	Br	Ĥ
	Et	H	CI	CHMe0Me	Br	H .
10	Pr-i	H	C1	CH ₂ OMe	Br	H
	Pr-i	H	C1	CH ₂ OE t	Br	H
	Ме	Йe	Ме	CH ₂ OMe	Br	H H H H H H H
	Et	Ме	Ме	CH ₂ OMe	Br	H
15	Et Pr-i	Me	· Ме	CH ₂ OE t	Br	H
	Me	Ме Ме	Me Cl	CH ₂ OMe CH ₂ OMe	Br	H H
	Et	ne Me	C1	CH ₂ OMe	Br Br	n u
	Et	Me	CI	CH ₂ OEt	. Br	H
20	Ēt	Me	CI	CHMe0Me	Br	H H H
	Pr-i	Мe	CI	CH₂0Me	Br	Ħ
	Me	H	Me	CH ₂ OMe	Ī	H
	Me	H	Мe	CH ₂ OEt	I	H
	Et	H	Мe	CH₂0Me	I	H
25	Et	H	Мe	CH ₂ OEt	Ī	H H H
	Et	H	Ме	CHMeOMe	Ī	H
	Pr-i	H	Ме	CH₂OMe	I I	H
	Pr-i	H	Ме	CH ₂ OEt	1	H
30	Me Me	H H	C1 C1	CH ₂ OMe CH ₂ OEt	I T	H H
	Et	H	CI	CH ₂ OMe	I I I	П Н
	Et	H	C1	CH ₂ OEt	Ť	H H
	Et	H	C1	CHMeOMe	į	Ĥ
35	Pr-i	H	C1	CH₂0Me	Ĩ	H H
	Pr-i	H	C1	CH ₂ OEt	I	H
	Me	Me	Мe	CH₂OMe .	I	H H
	Et	Ме	Me	CH ₂ OMe	Ī	H
40	Et	Мe	Мe	CH ₂ OEt	Ī	H
40	Pr-i	Me	Ме	CH₂0Me	Ţ	H
	Ме	Ме	C1	CH 20Me	· I	H
	Et E÷	Me M-	C1	CH 20Me	i T	n u
	Et Et	· Me Me	Cl Cl	CH≥OEt CHMeOMe	· 1 T	H H H H
45	Pr-i	ne Me	CI	Chrieone CH ₂ 0Me	Ţ	. н
	Me	H	Ме	CH ₂ OMe	SCF ₃	Ħ
	Me.	H	Ме	CH _z OEt	SCF ₃	Ħ

5	A	В	Х	Y	Z	Ę.
	Et	H	Me	CH₂0Me	SCF ₃	H H H H H H
	Et	H	Ме	CH ₂ 0Et	SCF 3	Ħ
	Et	H	Мe	CHMeOMe	SCF3	H
10	Pr-i	H	Me	CH ≥0Me	SCF 3	H
	Pr-i	H	Мe	CH ₂ OEt	SCF ₃	H
	Me	H	C1	CH₂0Me	SCF ₃	H
	Me	H	Cl	CH ₂ OEt	SCF ₃	H
	Et	H	C1	CH₂0Me	SCF ₃	H
15	Et	H	CI	CH ₂ OEt	SCF ₃	H H
	Et	H	C1	CHMeOMe	SCF ₃	H
	Pr-i	H	Cl	CH _z 0Me	SCF ₃	H
	Pr-i	H	C1	CH ₂ OEt	SCF ₃	H
20	Me	Ме	Мe	CH ₂ 0Me	SCF ₃	H H H H H
	Et	Ме	Мe	CH ₂ 0Me	SCF ₃	H
	Et	Мe	Me	CH ₂ OEt	SCF 2	H
	Pr-i	Мe	Ме	CH₂0Me	SCF 3	<u>H</u>
	Me	Иe	C1	CH _z OMe	SCF ₃	H
25	Et	Me	C1	CH₂0Me	SCF ₃	. H
	Et	Мe	CI	CH ₂ OEt	SCF ₃	H H H H H H H H H H H
	Et	Мe	C1	CHMeOMe	SCF ₃	H
	Pr-i	Мe	C1	CH ₂ 0Me	SCF ₃	H
	Ме	H	Me	CH₂0Me	SO ₂ CF ₃	H
30	Me	H	Иe	CH ₂ 0Et	SO ₂ CF ₃	<u>H</u>
	Et	H	Ме	CH₂0Me	SO ₂ CF ₃	Ħ
	Et	H	Мe	CH ₂ 0Et	SO ₂ CF ₃	H
	Et	H	Мe	CHMeOMe	SO ₂ CF ₃	H
35	Pr-i	H	Ме	CH ₂ 0Me	SO ₂ CF ₃	H
•••	Pr-i	H	Me	CH ₂ OEt	SO ₂ CF ₃	H
	Ме	H	C1	CH₂0Me	SO ₂ CF ₃	H
	Йe	H	C1	CH ₂ OEt	SO ₂ CF ₃	п
	Eż	H	C1	CH₂0Me	SO ₂ CF ₃	H
40	Et	H	C1	CH ₂ OEt	SO ₂ CF ₃	H
	Et	H	C1	CHMeOMe	SO ₂ CF ₃	H
	Pr-i	H	Cl	CH 20Me	SO ₂ CF ₃	H
	Pr-i	H	Ç1	CH ₂ 0Et	SO ₂ CF ₂	H
	Ме	Ме	Ме	CH ₂ 0Me	SO ₂ CF ₃	Н Н П Н
45	Et	Ме	Ме	CH ₂ OMe	SO ₂ CF ₃	п
	Et	Me	Me	CH ₂ OEt	SO ₂ CF ₂	H T
	Pr-i	Me	Me	CH ₂ 0Me	SO ₂ CF ₃	
	Me ·	Me	C1	CH ₂ OMe	SO _z CF ₃	H

0 282 944

A	В	Х	Y	Z	Q
5 Et Et Et Pr-i	Не Не Не Ме	CI CI CI	CH₂OMe CH₂OEt CHMeOMe CH₂OMe	S0 ₂ CF ₃ S0 ₂ CF ₃ S0 ₂ CF ₃ S0 ₂ CF ₃	H H H

,

	A	В	X	Y	. Z	Q.
5	Me	Н	Me	C00Me	Ms	Na .
	Ме	H	Ме	COOMe	Ms	K
	Me	H	Мe	C00Me	Ms	Ca1/2
	Me	H	Ме	COOMe	Ms	Mg _{1/2}
10	Мe	H	Ме	COOMe	Ms Ms	EtN + H3 i-PrN + H3
	Me Me	H H	Me Me	С00Не С00Не	ns Ms	EtzN+ Hz
	Me	H	Me	COOMe	Ms	MeaN - CH2CH2OH
	Et	H	Жe	COOMe	Ms	Nа
15 _.	Et	H	Мe	COOMe	Ms	K
	Et	H	Ме	COOMe	Ms	Ca _{1/2}
	Et	H	Ме	· COOMe	Ms Ms	Mg _{1/2} EtN H ₃
	Et Et	H H	Ие Ие	C00Me C00Me	ns Ms	i-PrN+ Ha
20	Et	H	Me	COOMe	Ms	EtaN+ H2
	Et	H	Ме	C00Me	Ms	MeaN CH2CH2OH
	i-Pr	H	Мe	C00Me	Ms	Na
	i-Pr	H	Йe	COOMe	Ms V-	K
25	i-Pr	H H	Мe	COOMe COOMe	Ms . Ms	Ca _{1/2} Mg _{1/2}
	i-P r i-Pr	H	Ие Ие	COOMe	Ms	EtN+ H ₃
	i-Pr	H	Ие	COOMe	Ms	i-PrN+ H ₃
	i-Pr	Н -	Йe	C00Me	Ms	EtzN+ Hz
30	i-Pr	H	Ме	COOMe	Ms	Me ₃ N ⁺ CH ₂ CH ₂ OH
	lle	Me	Ме	COOMe	Ms Ms	i-PrN ⁺ H ₃ Na
	Et Et	Me Me	Me Me	COOMe COOMe	ms Ms	i-PrN* H ₃
	i-Pr	ме	Ме	COOMe	Ms	i-PrN+ H ₃
35	Ме	H	Č1	C00Me	Ms	Na
	' Me	H	CI	C00Me	Ms	K
	·Me	H	C1	COOMe	Ms Ms	Ca1/2 Mg1/2
40	Me Me	H H	CI Cl	COOMe COOMe	ns Ms	EtN+ H ₃
40	ne Me	n H	Cl	COOMe	ii. Sh	i-P⊤N* H₃
	Иe	H	C1	C00Me	Ms	EtzN+ Hz
	Мe	H	C1	COOMe	Мs	MeaN* CH2CH2OH
15	Et	. Н	C1	COOMe	Ms H-	Na K
45	Et . Et .	H	C1	COOMe COOMe	ns Ns	n Ca₁∕z
	Et	H H	C1 C1	COOMe	er er	Mg1/2
			71			

			v	V	Z	
5	A	B	X	Y	4	Ç.
Ū	Et	H	C1	C00Me	Ms	EtN+ Ha
	Et	H	Cl	C00Me	Ms	i-PrN+ Ha
	Εt	Н .	Cl	COOMe	Яs	EtzN- Hz
10	Et	H	C1	C00Me	Ms	MegN+ CHzCHzOH
70	i-Pr	H	C1	COOMe	ijs -	Na
	i-Pr	H	CI	C00Me	Ms	K
	i-Pr	H	C1	COOMe	ağı V-	Ca _{1/2}
	i-Pr	H	CI	COOMe COOMe	Ms Ms	Mg _{1/2} EtN ⁺ Ho
15	i-P r i-P r	H H	C1 C1	COOMe	Ms	i-PrN+ Ha
	i-Pr	H	Cl	COOMe	is As	Et ₂ N ⁺ H ₂
	i-Pr	· H	C1	COOMe	Ms	Me ₃ N ⁺ CH ₂ CH ₂ OH
	Мe	Йe	Čĺ	C00Me	Ms	i-PrN+ H ₃
20	Et	Ме	ČĪ	C00Me	Ms	Na
	Et	Ме	C1	C00Me	Ms	i-PrN+ Ha
	i-Pr	Ме	C1	C00Me	Ms	i-PrN* Ha
	Мe	- H	0Me	C00Me	Ms	Na
25	Ме	H	0Me	C00Me	Ms V	K
	Йe	H	0Me	COOMe COOMe	Ms Ms	Ca _{1/2}
	Me Me	H H	0Me 0Me	COOMe	ns Ms	Mg _{1/2} EtN ⁺ H ₃
	ne Me	H	One OMe	COOMe	Ms	i-P r N+ H ₃
	Me	H .	OMe	COOMe	Ms	Et ₂ N+ H ₂
30	Иe	Ĥ	0Me	COOMe	Ms	MeaN+ CH2CH2OH
	Et	Ĥ	- 0Me	C00Me	Ms	Na
	Et	H	0Me	C00Me	Ms	K
	Et	H	0Me	COOMe	Ms	Ca 1/2
35	Et	H	0Me	COOMe	Жs	Mg _{1/2}
	Et	H	0Me	C00Me	Ms Ms	EtN+ H ₃ i-PrN+ H ₃
	Et	H	OMe	COOMe	Ms Ms	Et ₂ N ⁺ H ₂
	Et Et	H H	OMe OMe	COOMe COOMe	ns Ms	Me ₃ N ⁺ CH ₂ CH ₂ OH
40	i-Pr	H	one OMe	COOMe	is is	Na
	i-Pr	H	0Me	COOMe	Ms	K
	i-Pr	Ħ	0Me	COOMe	Ms	Ga 1/2
	i-Pr	. Й	0Me	COOMe :	Ms	Mg:/2
45	i-Pr	H	0Me	C00Me	Ms	EtN+ H3
	i-Pr	·H	0Me	C00Me	Ms	i-PrN+ Ha
	i-Pr	H	0Me	COOMe	Ms	EtzN+ Hz
	i-Pr	H	0Me	C00Me	Ms	MeaN+ CHaCHaOH

5	<u>A</u>	Б	X	Y	Z	Ç,
	Et	Йe	Ойе	C00He	Ms	i-PrN+ H ₃
	Мe	H	Мe	COOEt	Ms	Na
	Ме	H	Мe	COOE t	гĸ	K
10	Ме	H	Me	COOE t	Ms	Cai/z
10	Мe	H	Me	COOE t	Ms	Mg 1 /2
	Мe	H	Мe	COOE t	Ms	Mg _{1/2} EtN H ₂
	Me	H	Мe	COOE t	2Ms	i-PrN+ H ₃
	Ме	Ħ	Ме	COOEt	aK	EtzN- Hz
15	Ме	H	Ме	COOE t	Ms	MeaN CH2CH2OH
	Et	H	Me	COOEt	Ms	Na Na
	Et	H	Ме	COOEt	Ms	K
	Et	H		COOEt		
	D €	H	Me		Ms X-	Ca _{1/2}
20	Et Et	U U	Me	COOE t	Ms M-	Mg _{1/2}
	E t	H	Ме	COOE t	Ms	EtN+ H ₃
	Et Et	H	Ме	COOE t	Ms	i-PrN+ Ha
	E E	H H	Me	COOEt	Ms	EtzN+ H2
	Et		Мe	COOE t	Ms	MeaN+ CH2CH2OH
25	i-P r	H	Me	COOE t	Ms	Na
	i-Pr	H	Ме	COOEt	Ms	K
	i-Pr	H H H	Me	COOE t	Ms	Cai/z
	i-Pr	Η	Мe	COOE t	Ms	Mg1/2
	i-Pr		Иe	COOE t	Ms	EtN- H3
30	i-Pr	. Н .	Мe	COOEt	Ms	i-PrN+ H3
	i-Pr	H	. Me	COOE t	Ms	EtzN+ H2
	i-Pr	H	Me	COOE t	Ms	Me ₃ N ⁺ CH ₂ CH ₂ OH
	Me	Me	Йe	COOEt	Ms	i-PrN+ Hs
	Εt	Мe	Ме	COOE t	Ms	Na
35	Et	Мe	Мe	COOE t	Ms	i-PrN H3
	i-Pr	Мe	Мe	COOE t	Ms	i-PrN+ Ha
	′ Me	H	C1	COOE t	Мs	Na
	-Me	H	C1	COOEt	Ms	K
40	Иe	H	Cl	COOE t	Ms	. Ca _{1/2}
40	Мe	H	Cl	COOEt	Ms	Mg1/2
	Мe	H	Cī	COOEt	Ms	EtN+ H3
	Мe	H	Cl	COOE t	Ms	i-PrN+ H ₃
	Мe	H	C1	COOEt	Ms	EtzN+ Hz
45	Me	. Н Н	CI	COOEt	Ms	Me ₃ N+ CH ₂ CH ₂ OH
-	Et		C1	COOEt	Ms	Na Na
	Et Et	H	C1	COOEt	Ms	K
	Et	H	C1	COOEt	Ms	Ca _{1/2}
		. 11		00000	119	Va 1/2
50		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	

0 282 944

5	A	Е	X	Υ	Z	Q
J	Et	Ħ	C1	COOE t	Ms	Mg1/2
	Εt	H	C1	COOE t	Ms	EtN ⁺ H ₃
	Εt	H	C1	COOE t	Иs	i-PrN- Ha
	Εŧ	Н	CI	COOE t	Ms .	EtzN+ Hz
10	Et	H	C1	COOE t	Ms	Me ₃ N ⁺ CH ₂ CH ₂ OH
	i-Pr	H	C1	COOE t	Иs	Na
	i-Pr	H	C1	COOEt	Ms	K
	i-2 -	H	C1	COOEt	Ms	Ca1/2
15	i-Pr	H	C1	COOE t	Ms	Mgi/s
15	i-Pr	Ħ	Cl	COOEt .	Ms	Etn ⁺ H ₃
	i-Pr	Ħ	Ci	COOE t	zK	i-PrN+ H3
	i-Pr	Ĥ	ČĪ	COOEt	Ms	Et ₂ N+ H ₂
	i-Pr	Η̈́	ČĪ	COOEt	Ms	Me ₃ N+ CH ₂ CH ₂ OH
20	Иe	Йe	ČĪ	COOEt	Ms	i-PrN+ H3
	Et	Иe	ČĪ	COOEt	Ms	Na
	Ēt	Me	ČI	COOEt	Ms	i-PrN+ H ₃
	i-P r	Me	ČÌ	COOEt	Ms	i-PrN+ H ₃
	Ме	H	0Me	COOEt	Ms	Na
25	Иe	Ĥ	0Me	COOEt	Ms	K
•	Ме	Ħ	0Me	COOEt	Ms	Ca _{1/2}
	Иe	Ħ	0Me	COOEt	Ms	Mgi/z
	Ме	Ħ	0Me	COOEt	Ms	Etn' H3
	Me	Ħ	0Me	C00Et	Ms	i-PrN+ H ₃
30	Мe	H	0Me	COOEt	Ms	EtzN+ H2
	Me	H	0Me	C00Et	Ms	MeaN+ CH2CH2OH
	Et	H	0Me	C00Et	Ms	Na
	Et	Ħ	0Me	COOE t	Ms	K
35	Et	H	0Me	COOEt .	Ms	Cai/z
	Et	H	0Me	COOEt	Ms	Mg1/2
	· Et	H	0Me	COOE t	Ms	EtN+ H3
	- Et	H	0Me	COOE t	Ms	i-PrN+ H3
	Et	H	0Me	COOE t	Ms	EtzN+ Hz
40	Et	H	0Me	COOE t	Ms	MeaN+ CH2CH2OH
	i-Pr	H	0Me	COOE t	Ms	Na
	i-P r	H	0Me	COOE t	Ms	K
	i-Pr	. Н	0Me	COOEt	Ms	Ca _{1/2}
45	i-Pr	H	0Me	COOEt	Ms	Mg1/2
	i-Pr	H	0Me	COOE t	Ms	Etn+ H ₃
	i-Pr	H	0Me	COOE t	Ms	i-PrN+ H3
	i-Pr	H	0Me	COOEt	Ms	EtzN+ Hz

A B	X	Y	Z	Q
i-Pr H	OMe	COOEt	Ms	MesN° CH2CH2OH
Et Me	0Me	COOEt	Ms	i-PrN+ Ha
Me H	Ме	COOPr-i	Ms	.Na
Me H	Ме	COOPr-i	Яs	K
¹⁰ Me H	Ме	COOPr-i	Ms	Calz
Me H	Ме	COOPi	Ms	Mgi/z
Me H	де	COOPT-i	Ms	EtN+ H ₃
Me H	Ме	COOPr-i	Ms	i-PrN- H ₃
15 Me H	Ме	COOPr-i	Ms	Etzil Hz
Me H	Ме	COOPT-i	Ms	MeaN+ CH2CH2OH
Et H	Ме	COOPT-i	Ms · Ms	Na
Et H	. Ne	COOPT-i	Ms	K
Et H	Мe	COOPT-i	Ms	Ca _{1/2}
20 Et H Et H	Ме	COOPT-i	Ms Ms	Mg ₁ ∕2 EtN⁺ H₃
	Me M-	COOPr-i COOPr-i	ns Ms	i-PrN+ Ha
Et H Et H	Ме		ns Ms	EtzN+ Hz
Et H	Йe	COOPr-i COOPr-i	ns Ms	Me ₃ N ⁺ CH ₂ CH ₂ OH
25 i-Pr H	йе Ме	COOPT-I	Ms	Na Na
i-Pr H	ne Ne	COOPT-I	ns Ms	K
i-Pr H	ile ile	COOPr-i	Ms	Ca _{1/2}
i-Pr H	ne Ne	COOPT-I	Ms	Mg1/2
i-Pr H	. Me	COOPT-i	Ms	Etn H ₃
i-Pr H	. Ne Me	COOPr-i	Ms	i-PrN+ Hs
i-Pr H	Мe	COOPr-i	Ms	Et ₂ N+ H ₂
i-Pr H	Ме	COOPr-i	Ms	MeaN+ CH2CH2OH
Me Me	Жe	COOPr-i	2K	i-PrN H ₃
35 Et Me	Иe	COOPr-i	Ms	Na
Et Me	Ме	COOPr-i	Ms	i-PrN+ Ha
î-Pr Me	Ме	COOPr-i	Ms	i-PrN+ Ha
-Me H	C1	COOPr-i	Ms	Na
Me H	C1	COOPr-i	Ms	K
40 Me H	C1	COOPr-i	Ms	Ca _{1/2}
Me H	C1	COOPr-i	Ms	Mg1/2
Me H	C1	COOPr-i	Ms	EtN+ H ₃
Me H	C1	COOPr-i	Ms	i-PTN+ H3
Ma H	CĨ	COOPr-i	Ms	EtzN+ Hz
⁴⁵ Me ⋅ H	C1	COOPr-i	Ms	MeaN CH2CH2OH
Et' H	CI	COOPr-i	Ms	Na
Et H	CI	COOPr-i	Ms	K

55

٠,

5	A	В	Х	Y	Z	Q
3	Εt	H	CI	COOPT-i	Иs	Cai/z
	Et	H	C1	COOPr-i	zK	Mg _{1/2}
	Et	H	CI	COOPr-i	Яs	EtN- H3
10	£t Et	H	CI	COOPi	Ms H-	i-PrN+ H ₃
-	Et	H H	Cl Cl	COOPr-i COOPr-i	Ms Ms	EtzN+ Hz MezN+ CHzCHzOH
	i-Pr	H	Cl	COOPr-i	ns Ms	Na Na
	i-Pr	H	C1	COOPT-i	Ms	K
15	i-P r	Ĥ	Cī	COOPT-i	Ms.	 Ca _{1/2}
13	i-Pr	H	CI	COOPr-i	Иs	Mg1/2
	i-Pr	H	C1	COOPT-i	2K	EtN+ H3
	i-Pr	H	C1	COOPr-i	lis	i-PrN+ H3
	i-Pr	H	Cl	COOPr-i	Яs	Et ₂ N ⁺ H ₂
20	i-Pr Me	H Me	CI CI	COOP r -i COOPr-i	Ms Ms	MesN* CH2CH2OH i-PrN* H3
	rie Et	ne Me	CI CI	COOPF-I	ns Ys	Na
	Et	Me	C1	COOP _T -i	iis Ms	i-PrN+ H ₃
	i-Pr	Ме	CI ·	COOPr-i	Ms	i-PrN+ Ha
25	Ме	. Н	0Me	COOPr-i	Ms	Na
	Ме	H	0Me	COOPr-i	Ms	K ·
	Me	H	0Me	COOPr-i	Ms	Ca _{1/2}
	Ме	H	0Me	COOPr-i	Ms M-	Mg _{1/2}
30	ile Ne	H .	OMe OMe	COOPr-i COOPr-i	Ms Ms	EtN+ H ₃ i-PrN+ H ₃
	ne Me	Н	one OMe	COOPT-I	Ms	EtzN+ Hz
	Me	H	0Me	COOPr-i	Ms	Me ₃ N ⁺ CH ₂ CH ₂ OH
	Et	H .	0Me	COOPr-i	Ms	Na
35	Et	H	0Me	COOPr-i	Ms	K
	Et	H	0Me	COOPr-i	Ms	Cai/z
	Et	H	0Me	COOPr-i	Ms	Mg _{1/2}
	-Et	H	0Me	COOPr-i	Ms W-	EtN+ H ₃ i-PrN+ H ₃
40	Et Et	H H	OMe OMe	COOPr-i COOPr-i	Ms Ms	Et ₂ N ⁺ H ₂
	Et	n H	one OMe	COOPT-I	Ms	Me ₃ N + CH ₂ CH ₂ OH
	i-Pr	H	0Me	COOPr-i	Ms	Na
	i-Pr	H	0Me	COOPT-i	Ms	K
45	i-Pr	H	OMe .	COOPr-i	Ms	Ca1/2
	i-Pr	. Н	0Me	COOPr-i	Ms	Mg1/2
	i-Pr´	H	0Me	COOPr-i	Ms	EtN+ H3
	i-Pr	- H	0Me	COOPr-i	Ms	i-PrN* H ₃

	A	В	X	Y	Z	Q
5	i-Pr	H	0Me	COOPr-i	Нs	Et ₂ N ⁺ H ₂
	i-Pr	H	0Me	COOPT-i	Ms	Me ₃ N ⁺ CH ₂ CH ₂ OH
	Et	Мe	one 0Me	COOPr-i	Ms	i-PrN+ H ₃
	Me	H	Me	COOCH ₂ CH ₂ OMe	Ms	Na
10	Ме	H	Ме	COOCH ₂ CH ₂ OMe	Ms	K
	Me	H	ne Me	COOCH 2CH 20Me	ns Ms	
	ие Ие	n H			ns Ms	Ca _t /z
	Me	H	Ме	COOCH CH OME		Mg _{1/2}
		Ω	Ме	COOCH CH OME	Ms	EtN+ H ₃
15	Me Ma	H	Ме	COOCH CH ON-	Ms N-	i-PrN+ H ₃
	Me Me	H H H	Ме	COOCH CH ONe	Ms	EtzN+ Hz
	Et	Ω n	Me M-	COOCH CH OME	Ms	MeaN CH2CH2OH
		<u>п</u> 11	Ме	COOCH CH ON-	Ms	Na K
20	Et	H	Ме	COOCH CH OMe	Ms	
-	Et	H H	Ме	COOCH CH ON-	Ms Ma	Ca _{1/2}
	Et	n	Ме	COOCH CH ON-	Ms	Mg1/2
	Et	H	Me	COOCH CH 20Me	Ms	EtN+ H ₃
	Et	H	Me	COOCH CH OME	Ms V	i-PrN+ Ha
25	Et	H	Me	COOCH ₂ CH ₂ OMe	Ms	EtaN+ Ha
	Et.	H	Me	COOCH CH CM	Ms	Me ₃ N ⁺ CH ₂ CH ₂ OH
	i-Pr	H	Me	COOCH zCH zOMe	Ms	· Na
	i-Pr	H	Me	COOCH 2 CH 2 OMe	Ms	K
	i-Pr	H	Me	COOCH ₂ CH ₂ OMe	Ms	Ca _{1/2}
30	i-Pr	H .	Ме	COOCH ₂ CH ₂ OMe	Ms	Mg _{1/2}
	i-Pr	H	Ме	COOCH ₂ CH ₂ OMe	Ms	EtN- H ₃
	i-Pr	H	Ме	COOCH ₂ CH ₂ OMe	Ms	i-PrN+ H3
	i-Pr	H	Ме	COOCH ₂ CH ₂ OMe	Ms	EtzN+ Hz
35	i-Pr	H	Ме	COOCH ₂ CH ₂ OMe	Мs	Me3N CH2CH2OH
33	Ме	Ме	Ме	COOCH ₂ CH ₂ OMe	Ms	i-PrN+ H3
	Et	Ме	Ме	COOCH CH CH	Ms	Na · n. w. u
	Et	Ме	Me	COOCH ₂ CH ₂ OMe	Ms	i-P rN* H ₃
	i-Pr	Ме	Me	COOCH 2CH 20Me	Ms	i-PrN+ Ha
40	Ие	H	Cl	COOCH 2CH 2OMe	Ms	Na
	Ме	H	Cl	COOCH 2CH 20Me	Мs	K
	Me	H	Cl	COOCH ₂ CH ₂ OMe	Ms	Ca _{1/2}
	Ме	H	CI	COOCH ₂ CH ₂ OMe	Ms	Mgi/z
	Me	. Н	CI	COOCH zCH zOMe	Ms	EtN+ H ₃
45	Me	ı. H	Cl	COOCH 2CH 2OMe	Ms	i-PrN+ H3
	Me ,	H	C1	COOCH 2CH 2OMe	Ms	EtzN+ Hz
	Ме	H	CI	COOCH zCH 20Me	Ms	Me ₃ N - CH ₂ CH ₂ OH
	Et	H	C1	COOCH ₂ CH ₂ OMe	Ms_	Na Na

						
5	- A	В	X	Y	Z	Q
	Et	Н	C1	COOCH ₂ CH ₂ OMe	Ms	K
	Et	H	ČĪ	COOCH _z CH ₂ OMe	Ms	
	Et	H	Cl	COOCH ₂ CH ₂ OMe	Ms	Ca _{1/2}
	Et	Н	ČĪ	COOCH _z CH _z OMe	Ms	Mg _{1/2} EtN ⁺ H ₃
10	Et	. Н	CI	COOCH ₂ CH ₂ OMe	iis iis	i-PrN+ H ₂
	Et	. H	ČĪ	COOCH ₂ CH ₂ OMe	Ms	EtzN+ Hz
	Et	H	ČÌ	COOCH ₂ CH ₂ OMe	Ms	MeaN+ CH2CH2OH
	i-P-	H	C1	COOCH _z CH _z OMe	Ms	Na Na
15	i-Pr	H	Cī	COOCH2CH2OMe	Ms	K
	i-Pr	H	CI	COOCH ₂ CH ₂ OMe	Ms	Ca _{1/2}
	i-Pr	H	Cī	COOCH ₂ CH ₂ OMe	Ms	Mg1/2
	i-Pr	H	CI	COOCH ₂ CH ₂ OMe	Ms	EtN ⁺ H ₃
	i-Pr	H	C1	COOCH ₂ CH ₂ OMe	Ms	i-PrN+ Ha
20	i-Pr	H	Cl	COOCH ₂ CH ₂ OMe	Ms	EtzN+ Hz
	i-Pr	H	Cl	COOCHzCHzOMe	Ms	Me3N+ CH2CH2OH
	Мe	Мe	CI	COOCH ₂ CH ₂ OMe	Ms	i-P r N+ H ₃
	Et	Мe	Cl	COOCH _z CH _z OMe	Ms	Na
25	Εt	Мe	CI	COOCH2CH2OMe	Ms	i-PrN+ Ha
20	i-Pr	Ме	CI	COOCH2CH2OMe	Ms	i-PrN+ Ha
	Йe	H	0Me	COOCH _z CH _z OMe	Ms	Na
	Ме	H	0Me	COOCH ₂ CH ₂ OMe	Ms	K
	Ме	H H	0Me	COOCH _z CH _z OMe	Ms	Ca _{1/2}
30	Ме	H .	0Me	COOCH2CH2OMe	Ms	Mg1/2
	Ме	H	0Me	COOCH _z CH _z OMe	Ms	EtN+ H3
	Ме	H	· OMe	COOCH ₂ CH ₂ OMe	Ms	i-PrN+ Ha
	Ме	H	0Me	COOCH ₂ CH ₂ OMe	Ms	EtzN+ Hz
	Мe	<u>H</u>	0Me	COOCH ₂ CH ₂ OMe	Мs	MesN+ CH2CH2OH
35	Et	H	0Me	COOCH ₂ CH ₂ OMe	Ms	Na
	Et	. <u>H</u>	0Me	COOCH ₂ CH ₂ OMe	Ms	K
	Et	H	0Me	COOCH _z CH _z OMe	Ms	Ca _{1/2}
	EL	H	0Me	COOCH ₂ CH ₂ OMe	Ms	Mg _{1/2}
40	Et	H	0Me	COOCH ₂ CH ₂ OMe	Ms	Etn+ H ₃
	Et	H	0Me	COOCH _z CH _z OMe	Мs	i-PrN+ Ha
	Et	H	0Me	COOCH _z CH _z OMe	Ms	EtzN+ H2
	Et:	H	0Me	COOCH _z CH _z OMe	Ms	Me ₃ N ⁺ CH ₂ CH ₂ OH
	i-Pr	H	0Me	COOCH z CH z OMe	Ms	Na
45	i-Pr	H ·	0Me	COOCH ₂ CH ₂ OMe	Ms	K
	i-Pr,	H	0Me	COOCH ₂ CH ₂ OMe	Иs	Caiz
	i-Pr	H	0Me	COOCH ₂ CH ₂ OMe	Ms	Mg1/2
	i-Pr	H	0Me	COOCH ₂ CH ₂ OMe	Ms	Etn+ H ₃

. 5	A	В	Х	Y	Z	Q.
	i-Pr	H	0Me	COOCH 2CH 20Me	Ms	i-PrN- Ha
	i-Pr	H	0Me	COOCH zCH zOMe	Ms	EtzN+ Hz
	i-Pr	H	0Me	SMO2H32H3000	Ms	MesN- CH2CH2OH
10	Et	Мe	0Me	COOCH _z CH ₂ OMe	Ms	i-PrN+ Ha
,,	Мe	H	Ме	CH ₂ OMe	Ms	Na
	Me	H	Мe	CH ₂ OMe	Ms	К
	Мe	H	Ме	CH ₂ OMe	Ms	Ca _{1/2}
	Me	H	Мe	CH ₂ OMe	Ms	Mg:/2
15	Me	H	Мe	CH ₂ OMe	Мs	Eth- H3
	Me	H	Me	CH ₂ OMe	Ms	i-PrN- H ₂
	Мe	H	Me	CH ₂ OMe	Ms	EtzN- Hz
	Иe	H	Me	CH ₂ OMe	Ms	MeaN+ CH2CH2OH
	Et	H	Ме	CH ₂ OMe	Ms	Na
20	Et	H	Мe	CH _z OMe	Ms	K
	Et	. Н	Ме	CH _z OMe	Ms	Ca _{t/z}
	Et	H	Ме	CH₂OMe	Ms	Mg:/2
	Et .	H	Мe	CH ₂ OMe	Ms	EtN+ H ₃
25	Et	H H	Мe	CH _z OMe	Ms	i-PrN+ H ₃
20	Et	Н	Me	CH20Me	Ms	EtzN+ Hz
	Εt	Ħ	Мe	CH _z OMe	Ms	Me ₃ N ⁺ CH ₂ CH ₂ OH
	i-Pr	H H	Хe	CH ₂ OMe	Ms	Na
	i-Pr	H	Мe	CH_zOMe	Ms	K
30	i-Pr	H	Me	CH ₂ OMe	Ms	Ca:/2
	i-Pr	Н.	Мe	CH ₂ OMe	Ms	Mg1/2
	i-Pr	H H	Мe	CH₂OMe	Ms	EtN+ H3
	i-Pr	H	Me	CH ₂ OMe	Ms .	i-PrN- Ha
	i-Pr	H	Мe	CH ₂ OMe	zK s	EtzN+ H2
35	i-Pr	H	Йe	CH ₂ OMe	Ms	MesN+ CH2CH2OH
	Me	Ме	Ме	CH ₂ OMe	Ms	i-PrN+ Ha
	Et	Me	Ме	CH ₂ OMe	Мs	Na · · · · · · ·
	Et	Мe	Ме	CH ₂ OMe	zK	i-PrN+ H ₂
40	i-Pr	Ме	Иe	CH ₂ OMe	Ms	i-PrN+ Ha
	Ме	H	C1	CH _z OMe	ils	Na "
	Me	H	C1	CH ₂ OMe	Ms	K
	Ме	H	C1	CH _z OMe	ăs.	Ca _{1/2}
	Мe	H	CI	CH ₂ OMe	Ms M-	Mg _{1/2}
45	Me	· H	C1	CH ₂ OMe	Ms	EtN + H ₃ i-PrN + H ₃
	Me -	H	C1	CH ₂ OMe	Ms	i-PrN+ H ₃ Et ₂ N+ H ₂
	Me	H	C1	CH OMe	Ms	MeaN CH2CH2OH
	Ме	Н	Cl	CH₂OMe	Ms	Hear Chron

5	A	В	Х	Y	Z	Q.
	Et	H	Cl	CH₂0Me	Иs	Na
	F÷	H H	CI	CH ₂ OMe	Ms	na K
	Et Et	H	CI	CH ₂ OMe	ns Ms	
	Et	H	Cl	CH ₂ OMe	Ms	Ca:/2
10	Et	H	C1	CH ₂ OMe	ns Ms	Mg _{1/2} Etn H ₂
	Et	H	CI	CH ₂ OMe		
	Et	H	C1	CH ₂ OMe	Ms Ma	i-PrN+ Ha
	Et	H	CI	CH ₂ OMe	ağ "	EtzN* Hz
	i-Pr	H	CI	CHOME	Ms V-	MesN° CH2CHzOH
15	i-Pr	H		CH ₂ OMe	Ms	Na "
	i-Pr	Ω U	C1	CH _z OMe	Ms	K
	i-Pr	H .	C1	CH _z OMe	Ms	Ca1/2
	i-Pr	H .	C1	CH ₂ OMe	Ms	Mg1/2
20		Н	G1	CH₂0Me	Ms	EtN+ Ha
20	i-Pr	H	C1	CH ₂ OMe	Дs	i-PrN+ H ₃
	i-Pr	- H	C1	CH 20Me	eğ.	EtzN+ Hz
	i-Pr	H	C1	CH₂0Me	Ms	Me3N CH2CH2OH
	Ме	Яe	C1	CH₂0Me	Ms	i-PrN* H ₃
25	Et	Ме	C1	CH₂OMe	Ms	Na
	Et	Ме	C1	CH₂OMe	Ms	i-PrN+ H ₃
	i-Pr	<u>й</u> е	CI	CH ₂ OMe	Ms	i-PrN+ H3
	Мe	H	0Me	CH ₂ OMe	Ms	Na
	Me	<u>H</u> -	0Me	CH₂OMe	Ms	K
30	Мe	H	0Me	CH ₂ OMe	Ms	Ca _{1/2}
	.Me	H	0Me	CH _z OMe	Ms	Mg _{1/z}
	Ме	H	0Me	CH ₂ OMe	Ms	Etn+ H ₃
	Мe	H	0Me	CH ₂ OMe	Ms	i-PrN+ H ₃
	Ме	H	0Ме	CH ₂ OMe	Ms	EtzN+ Hz
35	Мe	H	0Me	CH 20Me	Ms	MeaN+ CH2CH2OH
	Et	H	0Me	CH ₂ OMe	Ms	Na
	Et	H	0Me	CH ₂ OMe	Ms	K
	Et	H	0Me	CH₂OMe	Мs	Cai/z
40	Et	H	0Me	CH ₂ OMe	Ms	Mg1/2
10	Et	H	0Me	CH ₂ OMe	Ms	Etn+ H ₃
	Et	H	0Me	CHzOMe	Мs	i-P r N+ Ha
	Et	H	0Me	CH ₂ OMe	Ms	EtzN+ H2
	Et	. Н	0Me	CH ₂ OMe	Ms	MeaN+ CHzCHzOH
45	i-Pr	H .	0Me	CH₂OMe	2M	Na
	i-Pr	H	0Me	CH₂OMe	Ms	K
	i-Pr	H	0Me	CH ₂ OMe	Ms	Ca _{1/2}
	i-Pr	H	0Me	CH ₂ OMe	Ms	Mg _{1/z}

5	A	В	Х	Y	Z	Q.
J	i-Pr	H	OMe	C∃₂0Me	Ms	EtN+ H ₃
	i-P r i-Pr	H H	0Me 0Me	CH₂OMe CH₂OMe	aK 2K	i-PrN+ Ha EsaN+ Ha
10	i-Pr	H	0Me	CH₂OMe	Ms	MeaN CH2CH2OH
	Et Me	Me H	0Me Me	CH₂OMe CH₂OE t	eM Ms	i-PrN+ H ₃ Na
	Ме	H	Ме	CH ₂ OEt	Ms	К
15	Ме Ме	H H	Ме Ме	CH ₂ OE t CH ₂ OE t	aM ZM	Ca _{1/2} Mg _{1/2}
	Ме	H	Мe	CH ₂ OEt	Ms	EtN ⁺ H ₃
	Me Me	H H	Ме Ме	CH ₂ OE t CH ₂ OE t	Ms Ms	i-PrN+ H ₃ Et ₂ N+ H ₂
20	Me Et	H H	Ме	CH ₂ OE t	Ms Ms	Me ₃ N ⁺ CH ₂ CH ₂ OH
	E.t	H	Me Me	CH ₂ OEt CH ₂ OEt	ns Ms	Na K
	Et Et	H H	Ме Ме	CH ₂ OEt CH ₂ OEt	Ms Ms	Ca _{1/2}
25	Εt	H H	Мe	CH ₂ OE t	Ms	Mg _{1/2} EtN ⁺ H ₃
	Et Et	H H	Me Me	CH ₂ OEt CH ₂ OEt	Ms Ms	i-PrN+ H ₃ EtzN+ H ₂
	Et	H	Мe	CHzOEt	Ms	Me3N+ CH2CH2OH
30	i-Pr i-Pr	H H H	Me Me	CH ₂ OEt CH ₂ OEt	Ms Ms	Na K
	i-Pr	H	Мe	CH ₂ OE t	Ms	Ca1/2
	i-P r i-Pr	H H H	Me Me	CH2OEt CH2OEt	Ms Ms	Mg _{1/2} EtN H ₃
35	i-Pr i-Pr	H H	Ме Ме	CH ₂ OEt CH ₂ OEt	Ms Ms	i-PrN+ H ₃ Et ₂ N+ H ₂
	i-Pr	H	Мe	CH ₂ OE t	Ms	Me3N+ CH2CH2OH
	íMe ∙Et	Ме Ме	Me Me	CH ₂ OEt CH ₂ OEt	Ms Ms	i-P rN ° H ₃ Na
40	Et	Мe	Йe	CH ₂ OE t	Ms	i-PrN+ H3
	i-Pr Me	Me H	Me Cl	CH ₂ OEt CH ₂ OEt	Ms Ms	i-P r N+ H ₃ Na
	Me Me	H H	C1 · C1	CH ₂ OEt CH ₂ OEt	Ms Ms	K Ca _{l/z}
45	Мe	. Н	C1	CH ₂ OEt	Ms	Mg1/2
	Me / Me	H H	CI Cl	CH ₂ OEt CH ₂ OEt	eM Ms	EtN+ H ₃ i-PrN+ H ₃
	Me	H	CI	CH ₂ OEt	Ms	EtzN- Hz

5	A	В	X	Y	Z	Ć.
	Мe	H	CI	CH ₂ OEt	Ms	MeaN CH2CH2OH
	Et	H	CI	CH ₂ OEt	zK	Na Na
	Εt	H	C1	CH ₂ OE t	Мs	K
	Et	H	ČĪ	CH ₂ OEt	Ms	Ca _{1/2}
10	Et	H H	C1	CH ₂ OE t	zK	Mg1/2
	Εt	H	CI	CH ₂ OEt	Ms	EtN H3
	Εt	H	CI	CH ₂ OEt	Ms	i-PrN- Ha
	Εt	H	C1	CH ₂ OE :	Ms	EtaN+ Ha
15	Ετ	H	C1	CH ₂ OEt	Мs	MesN- CH2CH2OH
	i-Pr	H	Cl	CH ₂ OE t	Ms	Na
	i-Pr	H	Cl	CH ₂ OEt	Ms	K
	i-Pr	H	CI	CH ₂ OEt	Ms	Ca1/2
	i-Pr	H	C1	CH ₂ OEt	Ms	Mg 1 /2
20	i-Pr	H	CI	CH _z OE t	Ms	EtN- H3
	i-Pr	H	C1	CH ₂ OE t	Ms	i-PrN+ Ha
	i-Pr	H	C1	CH ₂ OE t	Ms	EtzN+ Hz
	i-Pr	H	C1	CH ₂ OEt	Ms	MeaN+ CH2CH2OH
25	Ме	Ме	C1	CH ₂ OE t	Ms	i-PrN+ Ha
	Et	Me	C1	CH ₂ OE t	Ms	Na
	Et	Ме	CI	CH ₂ OE t	Ms	i-PrN+ Ha
	i-Pr	Ме	Cl	CH ₂ OEt	Иs	i-PrN+ H3
	Ме	H	0Me	CH ₂ OE t	Ms V	Na
30	Ме	H	OMe	CH ₂ OEt	Ms M-	K
	Me Me	H .	OMe	CH _z OEt	Ms Ma	Ca ₁ /2
	ne Me	H H	OMe OMe	CH ₂ OEt CH ₂ OEt	ak ek	Mg _{1/2} EtN ⁺ H ₃
	Me	H	one OMe	CH ₂ OEt	ns Ms	i-PrN+ Hs
35	Ме	H	one OMe	CH ₂ OE t	Ms	EtzN+ Hz
	Ме	H	0Me	CH ₂ OE t	Ms	MesN+ CHzCHzOH
	Et	H	0Me	CH ₂ OE t	Ms	Na
	· Et	Ĥ	OMe .	CH ₂ OEt	zK	K
	Et	Ħ	0Me	CH ₂ OE t	Ms	Ca _{1/2}
40	Et	Ĥ	0Me	CH ₂ OEt	Ms	Mg _{1/2}
	Et	H	0Me	ALL AD	· Ms	EtN H ₃
	Et	H	0Me	CH ₂ OE t	Ms	i-PrN+ Ha
	Et	. H	0Me	CH ₂ OE t	Ms	EtzN+ Hz
45	Et	H	0Me	CH ₂ OE t	Ms	MesN + CH2CH2OH
	i-Pr	H	0Me	CH _z OE t	Ms	Na
	i-Pr,	H	0Me	CH ₂ OE t	2M	K
	i-Pr	H	0Me	CH ₂ OE t	Ms	Ca _{1/2}

5	A	Б	X	Y	Z	Q.
J	i-P-	Н	0Me	CH _z OE t	Ms	Mg1/2
	i-P r i-Pr	H H	0 <u>Ме</u> 0Ме	CH ₂ OE t CH ₂ OE t	Ms Ms	EtN H ₃ i-PrN H ₃
10	i-Pr i-Pr	H	0Me	CH ₂ OE t	Ms	EtzN+ Hz
	i-Pr Et	H Me	OMe OMe	CH _z OEt CH _z OEt	Ms Ms	MeaN CH2CH2OH i-PrN Ha
	Мe	Н	Мe	CHMeOMe	Ms	Na
15	Ме Ме	H H	Me Me	CHMeOMe CHMeOMe	Ms Ms	K Ca _{1/2}
	Me Me	H H	Me Me	CHMeOMe CHMeOMe	Ms Ms	Mg _{1/2} EtN H ₃
	Me Me	H	Иe	CHMe0Me	2K	i-PrN+ Ha
20	Me Me	H H	Me Me	CHMeOMe CHMeOMe	Ms Ms	EtzN Hz MeaN CHzCHzOH
	Et	H	Me	CHMe0Me	Ms	Na
	Et Et	H . H	Ме Ма	CHMeOMe CHMeOMe	Ms Ms	K Ca₁/z
25	Et	H	Ме	CHMe0Me	Ms	Mg1/2
	Et Et	H H	Me Me	CHMeOMe CHMeOMe	Ms · Ms	EtN+ H3 i-PrN+ H3
	Et Et	H H -	Me Me	CHMeOMe CHMeOMe	Ms Ms	EtzN+ Hz Me3N+ CH2CH2OH
30	i-Pr	. Н	Ме	CHMe0Me	2K	Na
	i-Pr i-Pr	H H	Ме Ме	CHMeOMe CHMeOMe	Ms Ms	K Ca₁/2
	i-P r	H	Ме	CHMeOMe	Ms	Mg1/2
35	i-P r i-P r	H H	Йе Йе	CHMeOMe CHMeOMe	Ms Ms	EtN- Ha i-PrN- Ha
	i-Pr i-Pr	H H	Me Me	CHMe0Me CHMe0Me	Ms Ms	EtzN* Hz MeaN* CHzCHzOH
	- Me	Мe	Йe	CHMe0Me	Ms.	i-PrN+ H ₃
40	Et Et	Ме Ме	Ме Ме	CHMeOMe CHMeOMe	Ms Ms	Na i-PrN- H ₃
	i-P r	Мe	Мe	CHMeOMe	Ms	i-PrN+ Ha
	Ме Ме	H H	C1 C1	CHMeOMe CHMeOMe	eK eK	Na K
45	Мe	· H	Cl	CHMe0Me	ek ek	Ca1/2
	Ме́ Йе	H H	C1 C1	CHMeOMe CHMeOMe	Ms	Mg ₁ /z EtN+ H ₃
	Me	Н	Cl	CHMe0Me	ZK	i-PrN+ H ₃

					······	
5	A	В	X	Y .	Z	<u> </u>
	Me	Н	Cl	CAMe0Me	Ms	EtzW- Hz
	Мe	H	Cl	СНМеОМе	Ms	Me3N+ CH2CH2OH
	Et	H	C1	CHMeOMe	Ms	Na `
	Et	Ħ	Cl	CHMeOMe	Ms	K
10	Εt	H	C1	CHMeOMe	Ms	Ca _{1/2}
	Et	H	ČÌ	CHMeOMe	Ms	Mg:/2
	Et	Ä	ČĪ	CHMeOMe	Ms	Eth- Ha
	Et	H	ČÌ	CHMeOMe	Мs	i-PrN+ Ha
15	Ēτ	H	Č1	CHMeOMe	2K	Etziy Hz
15	Εt	H	Čĺ	CHMeOMe	Ms .	MeaN - CH2CH2OH
	i-Pr	. H	C1	CHMeOMe	Ms	Na
	i-P r	H	Či	CHMe0Me	Ms .	K
	i-Pr	Ĥ	Čĺ	CHMe0Me	Мs	Ca _{1/2}
20	i-Pr	Ĥ	Ci -	CHMe0Me	Ms	Mg:/2
	i-Pr	Η̈́	CI	CHMeOMe	Ms	EtN Ha
	i-Pr	Ĥ	ČĪ	CHMeOMe	Иs	i-PrN+ Ha
	i-Pr	H	ČÌ	CHMe0Me	Ms	EtzN+ Hz
	i-Pr	Ĥ	CÎ	CHMeOMe	lls	MeaN CH2CH2OH
25	Мe	Me	CI	CHMeOMe	Ms	i-PrN+ Ha
	Et	Ме	ČĪ	CHMeOMe	Ms	Na
	Ēt	Ме .	ČĪ	СНМеОМе	Ms	i-PrN+ H ₃
	i-Pr	Мe	Cl	CHMeOMe	Мs	i-PrN* Hs
30	Me	H	0Me	CHMeOMe	Ms	Na
••	Me	H	0Me	CHMeOMe	Ms	K
	Ме	H	0Me	CHMeOMe	Ms	Ca _{1/2}
	Ме	H	0Me	· CHMeOMe	Ms	Mg1/2
	Ме	H	0Me	CHMeOMe	Ms	EtN+ H3
35	Яe	H	0Me	CHMeOMe	Ms	i-PrN+ Ha
	Me	Н	0Me	CHMeOMe .	Ms	EtzN- Hz
	' Me	H -	0Me	CHMe0Me	Ms	MeaN CH2CH2OH
	- Et	H	0Me	CHMeOMe	Ms	Na .
40	Εt	H	0Me	CHMeOMe	Ms	K
40	Et	H	0Me	CHMeOMe	Ms	Catz
	Et	H	0Ме	CHMeOMe	Ms	Mg1/2
	Et	H	0Me	CHMeOMe	Ms	EtN H3
	Et	H	0Me	CHMeOMe	Ms	i-PrN Ha
45	Et	. Н	0Me	CHMeOMe	Ms	EtaN- Ha
	Et /	H	0Me	CHMeOMe	Ms	Me3N- CH2CH2OH
	i-Pr	. Н	0Me	CHMeOMe	Ms	Na
	i-Pr	H	0Me	CHMeOMe	Ms	К .

					<u>-</u>	
5	A	В	X	Y	Z	Q
	i-P r	H	0Ме	CHMeOMe	Ms	Ca _{1/z}
	i-Pr	H	0Me	СНИеОМе	en ZM	Mg:/2
	i-Pr	Ĥ	0Me	CHMeOMe	ar.	EtN H ₃
	i-P r	Ħ	0Me	CHMeOMe	aK	i-PrN- H ₃
10	i-Pr	H	0Me	CHMeOMe	Ms	EtzN+ Hz
	i-P r	Ħ	0Me	CHMeOMe	Ms	
	Et	Йe	0Me	CHMe0Me	Ms	
	Мe	H	Ме	CHMeOEt	Ms	i-PrN+ Ha
15	Ие	H H	Ме	CHMeOE t	iis Ms	Na K
,,	Мe	Ħ	Ме	CHMeOE:	en ZK	n Ca _{1/2}
	Ме	Ĥ	Me	CHMeOEt	Ms	Va1/2
	Ме	Ä	Me	CHMeOEt	Ms	Mg _{1/2} EtN H ₃
	Мe	Ħ	Ме	CHMeOE t	Ms	i-PrN+ Ha
20	Мe	Ħ	Ме	CHMeOEt	ns Ms	EtzN+ Hz
	Ме	Ĥ	Me	.CHMeOEt	ns Ns	
	Et	Ĥ	Ме	CHMeOEt	Ms	Me₃N⁺ CH₂CH₂OH Na
	E±	Ĥ	Ме	CHMeOE t	Ms.	K
	Et Et Et	Ħ	Me ·	CHMeOEt	Ms	C ₂
25	Et	Ħ	Ме	CHMeOE t	Ms	Ca _{1/2}
	Et		Ме	CHMeOE t	Ms	Mg _{1/z} EtN ⁺ H ₃
	Et	H H H	Ме	CHMeOEt	Ms	i-PrN+ H ₃
	Et	Ä	Ме	CHMeOE t	ak Sin	EtzN+ Hz
30	Et	Й -	Мe	CHMeOE t	Ms	Me ₃ N ⁺ CH ₂ CH ₂ OH
•••	i-Pr		Иe	CHMeOE t	Ms	Na Na
	i-Pr	Ĥ	Иe	CHMeOE t	en en	K
	i-Pr	H H H H	Ме	CHMeOE t	ZK ZK	Ca _{1/2}
	i-Pr	Ĥ	Ме	CHMeOE t	Ms	Mg1/2
35	i-Pr	Ħ	Мe	CHMeOE t	Ms	EtN H ₃
	i-Pr	H	Ме	CHMeOE t	Ms	i-PrN+ H3
	i-Pr	Η̈́	Ме	CHMeOE t	Ms.	EtzN+ Hz
	i-Pr	H	Йe	CHMeOE t	Ms	MeaN CH2CH2OH
40	Мe	Иe	Ме	CHMeOEt	Ms	i-PrN+ Ha
₩.	Et	Мe	Мe	CHMeOEt	Ms	Na
	Et	Мe	Me	CHMeOEt	Мs	i-PrN+ Ha
	i-Pr	Мe	Мe	CHMeOE t	zК	i-PrN+ Ha
	Мe	. H	C1	CHMeOE t	Ms	Na
45	Мe	H	C1	CHMeOE t	Иs	K
	Ме	H	CI	CHMeOE t	Мs	Ca _{1/2}
	Me	Ħ	C1	CHMeOE t	Ns	Mg _{1/2}
	Me	H	C1	CHMeOE t	Ms	EtN+ H3
						

5	A	В	X	Y	Z	Ę.
•	.Me	H	C1	CHMeOEt	Мs	i-PrN- Ha
	Ме	H	Cī	CHMeOE t	Мs	EtzN+ Hz
	Ме	H	CI	CHMeOE t	Мs	Me3N CH2CH2OH
	Et	H	ČÌ	CHMeOE t	Ms	Na Na
10	Ēt	Ħ	ČĪ	CHMeOE t	Ms	K
	Et	H	ČĪ	CHMeOEt	Ms	 Ca _{1/2}
	Et	Ħ	ČI	CHMeOEt	ak Z	Mg1/2
	Et	Ħ	CI	CHMeOEt	Мs	Etn' Ha
16	Ét	H	ČÌ	CHMeOEt	Иs	i-PrN+ Ha
15	Et	Ħ	Ci	CHMeOEt	Ms	EtzN+ Hz
	Et	H	ČÌ	CHMeOEt	Ms	MeaN+ CH2CH2OH
	i-Pr	H	C1	CHMeOEt	Ms	Na
	i-Pr	H	CI	CHMeOEt	iis Sh	K
20	i-Pr	H	C1	CHMeOEt	Ms	Ca _{1/2}
	i-Pr	H	Cl	CHMeOEt	Ms	Mg1/2
	i-Pr	H	C1	CHMeOEt	Ms	EtN+ H ₃
	i-Pr	H	C1	CHMeOEt	Ms	i-PrN+ H ₃
	i-Pr	H	C1	CHMeOEt	Ms	EtzN* Hz
25	i-Pr	n H	C1	CHMeOE t	Ms	Me ₃ N ⁺ CH ₂ CH ₂ OH
	Me	п Ме	C1	CHMeOE:	ns Ms	i-PrN+ Ha
	Et			CHMeOE t	ns Ns	
	Et	Me Me	CI			Na : n_u+ u
		Ме .	C1	CHMeOEt	Ms	i-PrN+ H ₃
30	i-Pr	Ме	CI OM-	CHMeOEt	Ms M-	i-PrN+ Ha
	Ме	H -	OMe	CHMeOEt	Ms M-	Na K
	Иe	H	OMe	CHMeOEt	Ms M	С-
	Ме	H	OMe	CHMeOE t	Ms	Ca _{1/2}
35	Йe	H H	OMe	CHMeOEt	Ms V-	Mg ₁ /z
33	Me	H.	. OMe	CHMeOEt	Иs	EtN+ H ₃ i-PrN+ H ₃
	Me	n m	OMe	CHMeOEt	Ms	
	'Me	H	0Me	CHMeOEt	Мs	EtzN+ Hz
	· Me	H	0Me	CHMeOEt	Ms Y-	Me ₃ N ⁺ CH ₂ CH ₂ OH
40	Et	H	0Me	CHMeOEt	Ms	Na
	Et	H	0Me	CHMeOEt	Ms	K
	Et	H	0Me	CHMeOEt	Ms	Ca _{1/z}
	Et	H	0Me	CHMeOEt	Ms M-	Mg _{1/2}
	Et	. Н	0Me	CHMeOEt	Ms	EtN- Ha
45	Et	H	0Me	CHMeOEt	Ms	i-PrN+ H ₃
	Eŧ	H	0Me	CHMeOEt	· Ms	EtzN+ Hz
	Et	H	0Me	CHMeOEt	Ms	Me ₃ N ⁺ CH ₂ CH ₂ OH
	i-Pr	H	0Me	CHMeOE t	Ms	Na

5	A	В	X	Y	Z	Q
J	i-Pr	H	0Me	CHMeOEt	Ms	K
	i-Pr	Ä	0Me	CHMeOEt	Ms	 Ca _{1/2}
	i-Pr	Ä	0Me	CHMeOEt	Ms	Mg1/2
	i-Pr	H	0Me	CHMeOE t	Ms	EtN+ H ₃
10	i-Pr	Ü	0Me	CHMeOEt	Ms	i-PrN+ H ₃
	i-Pr	H	0Me	CHMeOE t	Ms	Et ₂ N+ H ₂
	i-Pr	H	0Me	CHMeOEt	Ms	MeaN+ CH2CH2OH
	Et	Me	0Me	CHMeOEt	Ms	i-PrN+ H ₃
15	Ме	H	Ме	CH _z CO _z Me	Ms	Н
,,	Et	H	Ме	CH ₂ CO ₂ Me	Ms	Ä
	i-Pr	H	Ме	CH ₂ CO ₂ Me	Ms	H
	Me	Ĥ	Ме	CH ₂ CO ₂ Et	Ms	Ĥ
	Et	Ĥ	Ме	CH ₂ CO ₂ Et	Ms	H
20	i-Pr	Ĥ	Ме	CH _z CO _z Et	Ms	H
	Me	Ĥ	Мe	CH ₂ CO ₂ Pr-i	Ms	Ĥ
	Et	H	Ме	CH ₂ CO ₂ Pr-i	Ms	H
	i-Pr	Ĥ	Me	CH ₂ CO ₂ Pr-i	Ms	
	Мe	Ĥ	Мe	CHMeCO ₂ Me	Ms	H H
25	Et	Ĥ	Me	CHMeCO2Me	Ms	Н
	i-Pr	H	Me	CHMeCO ₂ Me	Ms	H
	Me	H	Me	CHMeCO ₂ Et	Ms	H
	Et	H	Me	CHMeCO ₂ Et	Ms	H
30	i-Pr	H	Me	CHMeCO ₂ Et	Ms	H
	Мe	. Н	Me	CHMeCO ₂ Pr-i	Ms	H
•	Et	H	Me	CHMeCO ₂ Pr-i	Ms	H
	i-Pr	H	Мe	CHMeCO ₂ Pr-i	Ms	H
	Me	Н	Ме	CH2CH2CO2Me	Ms	H
35	Et	H	Мe	CH ₂ CH ₂ CO ₂ Me	Ms	Н
	i-Pr	Н	Мe	CH ₂ CH ₂ CO ₂ Me	Ms	H
	Мe	Ħ	Мe	CH ₂ CH ₂ CO ₂ Et	Ms	H
	Et	Н	Ме	CH2CH2CO2Et	Ms	H
40	i-Pr	H	Ие	CH ₂ CH ₂ CO ₂ Et	Ms	H
40	Mé	H	Мe	CH2CH2CO2Pr-i	Ms	H
	Et.	Ħ	Ме	CH ₂ CH ₂ CO ₂ Pr-i	Ms	H
	i-Pr	H	Me	CH ₂ CH ₂ CO ₂ Pr-i	Ms	H H H
	Мe	, H	Мe	CH=CHOMe	Ms	H
45	Et	H	Мe	CH=CHOMe	Ms	
	i-Pr	H	Иe	CH=CHOMe	Ms	H
	Me	Н	Me	CH=CHOE t	Ms v-	H
	Et	H	Мe	CH=CHOE t	Ms	H

_	<u>A</u>	В	X	Y	Z	QQ.	
5	i-Pr	Н	Ме	CH=CHOE t	Ms	Н	
	Me	H	Ме	CH=CHOPr-i	Ms	H	•
	Et	H	Me	· CH=CHOPr-i	Ms	Н	
	i-Pr	Н	Me	CH=CHOPr-i	Ms	H	
10	Мe	H	C1	CH ₂ CO ₂ Me	Ms	Н	
	Et	H	Cl .	CH ₂ CO ₂ Me	Ms	H	
	i-Pr	H	CI	CH _z CO _z Me	Ms	Н	
	Me	H	CI	CH ₂ CO ₂ Et	Ms	H	
15	Et	H	C1	CH ₂ CO ₂ Et	Ms	H	
	i-Pr	Н	C1	CH_zCO_zEt	Ms	H	
	Me	H	C1	CH ₂ CO ₂ Pr-i	Ms	H	
	Et	H	C1	CH2CO2Pr-i	Ms	H	
	i-Pr	H	Cl	CH ₂ CO ₂ Pr-i	Ms	H	
20	Me	Н	C1	CHMeCO _z Me	Ms	H	
	Et	H	C 1	CHMeC0₂Me	Ms	H	
	i-Pr	Н	Cl	CHMeCO₂Me	Ms	H	
	Мe	H	Cl	CHMeCO ₂ Et	Ms	· . <u>H</u>	
	Et	H	C1	CHMeCO _z Et	Ms	H	
25	i-Pr	H	C1	CHMeCO _z Et	Ms	H	
	Me	H	C 1	CHMeCO _z Pr-i	Ms	Н	
	Et	H	Cl	CHMeCO _z Pr-i	Ms	H	
	i-Pr	H	CI	CHMeCO ₂ Pr-i	Ms	H	
30	Мe	H H	C1	CH ₂ CH ₂ CO ₂ Me	Ms	H	
	Et	H	C1	CH ₂ CH ₂ CO ₂ Me	Ms	H	•
	i-Pr	H	C1	CH ₂ CH ₂ CO ₂ Me	Ms	H	٠
	Ме	H	Cl	CH ₂ CH ₂ CO ₂ Et	Ms	H	
	Et	H .	C1	CH ₂ CH ₂ CO ₂ Et	Ms	<u>H</u>	
35	i-Pr	H	C1	CH ₂ CH ₂ CO ₂ Et	Ms	H	
	Me	H	C1	CH2CH2CO2Pr-i	Ms	Ĥ	
	Et	H	C1	CH ₂ CH ₂ CO ₂ Pr-i	Ms	H	
	i-Pr	H	C1	CH ₂ CH ₂ CO ₂ Pr-i	Ms	H	
40	Иe	H	C1	CH=CHOMe	Ms	H	
40	Et	H	C1	CH=CHOMe	Ms	H	
	i-Pr	H	C1	CH=CHOMe	Ms	H	
	Me	H	C1	CH=CHOE t	Ms	H H H	
	Et-	· H	C1	CH=CHOEt	Ms	п	•
45	i-Pr	H	Cl Cl	CH=CHOEt	Ms Ma	n H	
	Мe	H	CI	CH=CHOPr-i	Ms Ma	n H	
	Et -	H	Cl Cl	CH=CHOPr-i	Ms	n H	
	i-Pr	H	C1	CH=CHOPr-i	Ms	a	

When the compound of the present invention is to be used as an agricultural or horticultural herbicide, it is usually mixed with a suitable carrier, for instance, a solid carrier such as clay, talc, bentonite or diatomaceous earth, or a liquid carrier such as water, an alcohol (such as methanol or ethanol), an aromatic hydrocarbon (such as benzene, toluene or xylene), a chlorinated hydrocarbon, an ether, a ketone, an ester (such as ethyl acetate) or an acid amide (such as dimethylformamide). If desired, an emulsifier, a dispersing agent, a suspending agent, a penetrating agent, a spreader or a stabilizer may be added to prepare an optional formulation such as a liquid formulation, an emulsifiable concentrate, a wettable powder, a dust, a

granule or a flowable.

Further, if desired, other herbicides, various insecticides, bacteriocides, plant regulating agents or synergism agents may be combined at the time of the preparation of the formulations or at a time of the application of the herbicides.

As other herbicides to be combined with the herbicide of the present invention, there may be mentioned, for instance, compounds disclosed in Farm Chemicals Handbook, the 73rd Edition (1987). Among them, there may be mentioned, for example, atrazine, cyanazine, alachlor, metolachlor, EPTC, 2,4-D, butylate, dicamba, bromoxynil and tridiphane. Further, N-[(4,6-dimethoxypyrimidin-2-yl)-aminocarbonyl]-3-chloro-4-methoxycarbonyl-1-methylpyrazole-5-sulfonamide or N-[(4,6-dimethoxypyrimidin-2-yl)-aminocarbonyl]-3-bromo-4-methoxycarbonyl-1-methylpyrazole-5-sulfonamide as disclosed in U.S. Patent 4,668,277 may also be combined with the herbicide of the present invention.

The dose varies depending upon the application site, the season for application, the method for application, the type of the crop plant, etc. In general, however, the dose is usually within a range of from 0.001 to 10 kg per hectare as the amount of the active ingredient.

Now, Formulation Examples of the herbicides containing the compounds of the present invention as active ingredients, will be given. However, it should be understood that the present invention is by no means restricted to such specific Examples. In the following Formulation Examples, "parts" means "parts by weight".

20

15

FORMULATION EXAMPLE 1: Wettable powder Compound No. 3 of the present invention 60 parts

Zeeklite PFP (tradename for a kaolin-type clay, manufactured by Zeeklite Industries, Co., Ltd.) 33 parts

Sorpol 5039 (tradename for a mixture of a nonionic surfactant and an anionic surfactant, manufactured by

Toho Chemical Co., Ltd.) 5 parts

25 Carplex (tradename for a coagulation-preventing agent composed of a mixture of a surfactant and fine silica powder, manufactured by Shionogi Pharmaceutical Co., Ltd.) 2 parts

The above ingredients are homogeneously pulverized and mixed to form a wettable powder.

30

FORMULATION EXAMPLE 2: Wettable powder Compound No. 7 of the present invention 60 parts

Zeeklite PFP (tradename for a kaolin-type clay, manufactured by Zeeklite Industries, Co., Ltd.) 33 parts

Sorpol 5039 (tradename for a mixture of a nonionic surfactant and an anionic surfactant, manufactured by

Toho Chemical Co., Ltd.) 5 parts

Carplex (tradename for a coagulation-preventing agent composed of a mixture of a surfactant and fine silica powder, manufactured by Shionogi Pharmaceutical Co., Ltd.) 2 parts

FORMULATION EXAMPLE 3: Wettable powder Compound No. 15 of the present invention 60 parts
Zeeklite PFP (tradename for a kaolin-type clay, manufactured by Zeeklite Industries, Co., Ltd.) 33 parts
Sorpol 5039 (tradename for a mixture of a nonionic surfactant and an anionic surfactant, manufactured by
Toho Chemical Co., Ltd.) 5 parts

Carplex (tradename for a coagulation-preventing agent composed of a mixture of a surfactant and fine silica powder, manufactured by Shionogi Pharmaceutical Co., Ltd.) 2 parts

FORMULATION EXAMPLE 4: Wettable powder Compound No. 21 of the present invention 60 parts
Zeeklite PFP (tradename for a kaolin-type clay, manufactured by Zeeklite Industries, Co., Ltd.) 33 parts
Sorpol 5039 (tradename for a mixture of a nonionic surfactant and an anionic surfactant, manufactured by
Toho Chemical Co., Ltd.) 5 parts

Carplex (tradename for a coagulation-preventing agent composed of a mixture of a surfactant and fine silica powder, manufactured by Shionogi Pharmaceutical Co., Ltd.) 2 parts

FORMULATION EXAMPLE 5: Wettable powder Compound No. 25 of the present invention 60 parts Zeeklite PFP (tradename for a kaolin-type clay, manufactured by Zeeklite Industries, Co., Ltd.) Sorpol 5039 (tradename for a mixture of a nonionic surfactant and an anionic surfactant, manufactured by Toho Chemical Co., Ltd.) 5 parts

Carplex (tradename for a coagulation-preventing agent composed of a mixture of a surfactant and fine silica powder, manufactured by Shionogi Pharmaceutical Co., Ltd.) 2 parts

FORMULATION EXAMPLE 6: Wettable powder Compound No. 35 of the present invention 60 parts Zeeklite PFP (tradename for a kaolin-type clay, manufactured by Zeeklite Industries, Co., Ltd.) 33 parts Sorpol 5039 (tradename for a mixture of a nonionic surfactant and an anionic surfactant, manufactured by Toho Chemical Co., Ltd.) 5 parts Carplex (tradename for a coagulation-preventing agent composed of a mixture of a surfactant and fine silica

FORMULATION EXAMPLE 7: Emulsifiable concentrate Compound No. 3 of the present invention parts

2 parts

1.5

Xylene 78.5 parts

20 N,N-dimethylformamide 15 parts

powder, manufactured by Shionogi Pharmaceutical Co., Ltd.)

Sorpol 2680 (tradename for a mixture of a nonionic surfactant and an anionic surfactant, manufactured by Toho Chemical Co., Ltd.) 5 parts

25 The above ingredients are homogeneously mixed to obtain an emulsifiable concentrate.

FORMULATION EXAMPLE 8: Emulsifiable concentrate Compound No. 11 of the present invention parts

Xylene 78.5 parts

> N,N-dimethylformamide 15 parts

Sorpol 2680 (tradename for a mixture of a nonionic surfactant and an anionic surfactant, manufactured by Toho Chemical Co., Ltd.) 5 parts

35

FORMULATION EXAMPLE 9: Flowable Compound No. 3 of the present invention 40 parts Agrizole B-710 (tradename for a nonionic surfactant, manufactured by Kao Corporation) 10 parts Runox 1000C (tradename for an anionic surfactant, manufactured by Toho Chemical Co., Ltd.) 0.5 part 1% Rodopol water (tradename for a thickener, manufactured by Rhone-Poulenc)

40 Water 29.5 parts

The above ingredients are homogeneously mixed to form a flowable.

45

55

FORMULATION EXAMPLE 10: Flowable Compound No. 10 of the present invention 40 parts Agrizole B-710 (tradename for a nonionic surfactant, manufactured by Kao Corporation) 10 parts Runox 1000C (tradename for an anionic surfactant, manufactured by Toho Chemical Co., Ltd.) 0.5 part 1% Rodopol water (tradename for a thickener, manufactured by Rhone-Poulenc)

Water 29.5 parts

> FORMULATION EXAMPLE 11: Liquid formulation Compound No. 39 of the present invention 30 parts Nippol (tradename for a nonionic surfactant, manufactured by Nissan Chemical Industries, Ltd.) 10 parts Water 60 parts

The above ingredients are homogeneously mixed to obtain a liquid formulation.

FORMULATION EXAMPLE 12: Liquid formulation Compound No. 40 of the present invention 30 parts Nippol (tradename for a nonionic surfactant, manufactured by Nissan Chemical Industries, Ltd.) 10 parts Water 60 parts

FORMULATION EXAMPLE 13: Liquid formulation Compound No. 46 of the present invention 30 parts Nippol (tradename for a nonionic surfactant, manufactured by Nissan Chemical Industries, Ltd.) 10 parts Water 60 parts

10

FORMULATION EXAMPLE 14: Liquid formulation Compound No. 41 of the present invention 10 parts Sorpol W-150 (tradename for a nonionic surfactant, manufactured by Toho Chemical Co., Ltd.) 10 parts Water 80 parts

15

20

30

The above ingredients are homogeneously mixed to form a liquid formulation.

In their use, the above wettable powders, emulsifiable concentrates, flowables or liquid formulations are diluted with water from 50 to 1,000 times and applied so that the respective active ingredients will be from 0.001 to 5 kg per hectare.

The compounds of the present invention are applicable not only to agricultural and horticultural fields such as upland fields, paddy fields and orchards, but to non-agricultural fields such as athletic fields, vacant fields and railway sides for the control of various weeds. The dose in their application varies depending upon the application site, the season for application, the type of crop plants, etc. However, it is usually within a range of from 0.001 to 5 kg per hectare.

Now, the herbicidal activities of the compounds of the present invention will be described with respect to specific Test Examples.

TEST EXAMPLE 1: Test on the herbicidal effects in soil treatment

A plastic box having a length of 15 cm, a width of 22 cm and a depth of 6 cm was filled with a sterilized diluvium soil, and seeds Echinochloa crus-galli, Setaria viridis, Eleusine indica, Digitaria adscendens, Panicum dichotomiflorum, Abutilon theophrasti, Amaranthus lividus, Polygonum longisetum and Zea mays were sown, and tubers of Cyperus esculentus were further planted. The soil was covered thereon in the thickness of about 1.5 cm, and then a herbicide solution was applied onto the surface of the soil uniformly so that the active ingredient is distributed at a predetermined concentration. The herbicide solution was prepared by diluting a wettable powder, an emulsifiable concentrate, a liquid formulation or a flowable with water and applied onto the entire soil surface by means of a small spray. Three weeks after the application of the herbicidal solution, the herbicidal effects against each weed were determined on the basis of the following standard ratings. The results thereby obtained are shown in Table 6. The Compound Nos. correspond to the Compound Nos. in Table 3.

Standard ratings: 5: Growth control rate of more than 90% (almost completely withered)

- 4: Growth control rate of from 70 to 90%
 - 3: Growth control rate of from 40 to 70%
 - 2: Growth control rate of from 20 to 40%
 - 1: Growth control rate of from 5 to 20%
 - 0: Growth control rate of less than 5% (almost non-effective)

50

55

The above growth control rates were calculated by the following equation: Growth control rate (%) = $(1-\frac{T}{N}) \times 100$ where

T: Weight of the weed growth above the soil surface of the treated area

N: Weight of the weed grown above the soil surface of the non-treated area

TEST EXAMPLE 2: Test on the herbicidal effects in foliage treatment

A plastic box having a length of 15 cm, a width of 22 cm and a depth of 6 cm was filled with a sterilized diluvium soil, and seeds of Echinochloa crus-galli, Setaria viridis, Eleusine indica, Digitaria adscendens, Panicum dichotomiflorum, Xanthium strumarium, Abutilon theophrasti, Amaranthus lividus, Polygonum longisetum and Zea mays were spot-wisely sown, and tubers of Cyperus esculentus were further planted. Then, the soil was covered thereon in a thickness of about 1.5 cm. When the various weeds and crops grew to the 2 or 3 leaf stage, a herbicidal solution was uniformly sprayed on the foliages so that the active ingredient is applied in a predetermined concentration.

The herbicidal solution was prepared by diluting the wettable powder, the emulsifiable concentrate, the liquid formulation or the flowable as described in the above Formulation Examples with water and applied onto the entire surface of the foliages of the weeds and the crop plants by a small spray. Two weeks after the application of the herbicide solution, the herbicidal effects against each weed were determined on the basis of the standard ratings described in Test Example 1, and the phytotoxicity against each crop plant was determined on the basis of the standard ratings in Test Example 1. The results are shown in Table 7. The Compound Nos. in Table 7 correspond to the Compound Nos. in Table 3.

In Tables 6 and 7, the following abbreviations are used:

Dose: Dose of active ingredient (g/are)

EC: Echinochloa crus-galli (barnyardgrass)

20 SE: Setaria viridis (green foxtail)

EL: Eleusine indica (goosegrass)

DI: Digitaria adscendens (large crabgrass)

PA: Panicum dichotomiflorum (fall panicum)

AB: Abutilon theophrasti (velvet leaf)

25 AM: Amaranthus lividus (livid amaranth)

PO: Polygonum longisetum (persicaria blumei gross)

XA: Xanthium strumarium (cocklebur)

CY: Cyperus esculentus (yellow nutsedge)

ZE: Zea mays (corn)

30

35

40

45

50

Table 6

	Table											
10	Compound No.	Dose	EC	SE	EL	DI	PA	AB	AM	PO	CY	ZE
15	1	0.5	5 5 5	5 5 5	555	5 5 5	555	555	555	5 5 5	555	0 0 0
20	2	0.5 1 2	5 5 5	5 5 5	5555	5 5 5	555	555	5 5 5	555	5 5 5	0 0
25	3	0.5 1 2	555	5 5 5	555	555	5 5 5	5 5 5	5 5 5	5555	5 5 5	000
30	4	0.5 1 2	5 5 5	555	ភភភ	555	555	·5555	555	5 5 - 5	555	0 0 0
35	6	0.5 1 2	555	555	555	ກະກ	555	555	5 5 5	555	5555	000
40	7	0.5 1 2	5 5 5	5 5 5	555	555	555	555	5 5 5	555	5 5 5	0 0
45	8	0.5 1 2	555	555	555	555	5 5 5	555	5 5 5	555	5555	0 0 0

0 282 944

Table 6 (continued)

5						1				,	·	
10	Compound No.	Dose	EC	SE	EL	DI	PA	AB	AM	PO	CY	ZE
15	9	0.5 1 2	ភភភភ	555	555	555	5555	555	555	5 5 5	5 5 5	0
20	10	0.5 1 2	555	555	555	555	5 5 5	555	555	5 5 5	5 5 5	0
25	11	0.5 1 2	5 5 5 5	ກຕະ	மன்வ	555	555	5 5 5 5	555	5 5 5	5 5 5	0
30	12	0.5 1 2	ວ ວ ວ ວ ວ	5 5 5	ຕຕຕ	5 5 5	555	ភភភ	ເລເລເລ	555	5 5 5	0 0 0
35	13	0.5 1 2	555	מומומו	555	555	555	555	555	555	5 5 5	0 0 0
40	14	0.5 1 2	555	5 5 5	555	555	5 5 5	5 5 5	555	555	5 5 5	0 0 0
15	15	0.5	5 5 5	555	555	5 5 5	5 5 5	555	5 5 5	5 5 5	5 5 5	0 0

Table 6 (continued)

5		· · · · · · · · · · · · · · · · · · ·										
10	Compound No.	Dose	EC	SE	EL	DI	PA	A.B	AM ·	PO	CY	ZE
15	16	0.5	555	555	555	555	5555	555	5 5 5	5 5 5	5 5 5	0
20	17	0.5 1 2	555	₅ 555	555	555	വധന	555	555	5 5 5	555	0 0
25	18	0.5 1 2	555	555	555	555	555	555	555	5 5 5	555	0 0 0
30	19	0.5 1 2	555	555	555	សសឆ	555	5 5 5 5	555	555	555	0 0 0
35	20	0.5 1 2	សសស	555	555	യവയ	555	555	5 5 5	555	ភភភភ	0 0
40	21	0.5 1 2	555	555	555	5 5 5	555	555	5 5 5	555	555	0 0
45	22	0.5 1 2	555	5 5 5	ភភភភ	5 5 5	555	555	5 5 5	555	5 5 5	0 0

0 282 944

Table 6 (continued)

_													
10	Compound No.	Dose	EC	SE	EL	DI	PA	AB	AM	PO	CY	ZE	
15	23	0.5 1 2	555	555	555	555	ចេចច	555	555	555	5555	0 0 0	
20	24	0.5 1 2	555	555	555	555	ភភភភ	555	555	555	សសស	0	
25	25	0.5 1 2	ധനധ	ກກກ	555	555	555	555	555	555	555	0	
30	26	0.5 1 2.	555	5 5 5	ស សស	555	555	555	555	5 5 5	555	0 0	
35	27	0.5 1 2	555	555	555	ភភភភ	សមស	_ວ ວຣ _{ເວ}	555	555	555	0 0	
40	28	0.5 1 2	555	555	555	555	555	555	555	555	555	0 0	
45	29 .	0.5	555	5 5 5	555	5 5 5	5 5 5	5 5 5	555	5 5 5	555	0 0	

Table 6 (continued)

								·				
10	Compound No.	Dose	EC	SE	EL	DI	PA	ΑB	AM	PO	CĀ	ZΞ
15	30	0.5	ភភភភ	ധധധ	555	555	555	555	555	555	555	000
20	34	0.5 1 2	5555	555	ເນເລເນ	555	5555	555	555	555	555	000
25	35	0.5 1 2	555	សសស	ភភភភ	555	ភភភ ភ	សសស	555	ភភភ ភ	555	0
30	36	0.5 1 2	555	ភភភភ	ភេសភ	សសស	សសស	សសស	555	5 5 5 5	555	0 0
35	37	0.5 1 2	ភភភភ	សសស	ភេសស	សសស	ភភភភ	ភភភភ	555	5 5 5	555	0 0 0
40	39	0.5 1 2	ស្សស	ភភភភ	ອ ອ	សភស	യയ	ស 555	555	555	555	000
45	40	0.5	555	555	555	555	សសស	555	សសស	555	555	0 0

Table 6 (continued)

								·				
10	No. Compound	Dose	EC	SE	EL	ום	PA ·	AB	AM	PO	CA	ZE
15	41	0.5 1 2	555	ភភភភ	555	555	555	555	ភភភ	555	_ເ ນ ເນ ເນ ເນ ເນ	000
20	42	0.5 1 2	555	555	555	5 5 5	555	5555	555	555	ധവവ	0 0 0
25	43	0.5 1 2	សសស	555	555	555	5 5 5	5555	555	555	ភេសស	0
30	44	0.5 1 2	555	555	555	555	555	555	555	555	555	0 0
35	45	0.5 1 2	555	555	5 5 5	555	5 5 5	555	555	555	555	0 0 0
40	46	0.5 1 2	555	5 5 5	5 5 5	5 5 5	5 5 5	555	555	555	555	0 0
2	47	0.5 1 2	555	5 5 5	5 5 5	5 5 5	5 5 5	5 5 5	555	5 5 5	5 5 5	0 0

50

Table 6 (continued)

_												
10	Compound No.	Dose	EC	SE	EL	DI	P.d.	A B	AM	PO	CY	Æ
15	48	0.5 1 2	555	សសស	5 5 5	5 5 5	555	555	555	555	555	0 0
20	49	0.5 1 2	555	ເນເກເນ	₅ 555	5 5 5 5	₅ 555	សមស	555	555	555	000
25	50	0.5 1 2	5 5 5	ភភភភ	ຜູ້	ស 555	សសស	សលល	555	5 5 5	5 5 5	0 0 0
30	56	0.5 1 2	5 5 5	555	555	555	សសស	555	5 5 5	5 5 5	5 5 5	0 0
35	58	0.5	5 5 5	5 5 5	5 5 5	555	555	555	5555	5 5 5	5 5 5	0 0 0
40	61	0.5	5 5 5	5 5 5	5 5 5	5 5 5	555	5 5 5	555	5555	5 5 5	0
45	63	0.5	555	555	5 5 5	5 5 5	5 5 5	5 5 5	5 5 5	555	555	0

Table 6 (confined)

			• .					<u> </u>				
5	Campourd No.	Dose	EC	SZ	EL	DI	<u>Pa</u>	EA	AM	PO	CY	Œ
15	64	0.5 1 2	ນ ນ ນ	5 5 5	5 5 5	5 5 5	555	555	សលស	555	555	0 0
20	65	0.5 1 2	555	555	555	555	ກກກ	555	555	555	555	0 0
25	66	0.5 1 2	5 5 5	555	5 5 5	5 5 5	5 5	ឆេសឆ	555	555	555	0 0 0
30	67	0.5 1 2	5 5 5	555	5 5 5	555	5 5 5	555	ភភភភ	5 5 5	5 5 5	0 0 0
35	68	0.5 1 2	5 5 5	555	5 5 5	555	555	5 5 5	5 5 5	5 5 5	5 5 5	0 0
40	Reference Example A	4 8 16	· 3 4 5	1 2 3	3 4 5	3 4 5	1 2 3	4 5 5	555	555	0 0 1	0 0 1
45	Reference Example B	4 8 16	5 5 5	5 5 5	555	555	5 5 5	1 2 3	1 2 3	1 .2 .3	2 3 4	0 0 1

Table 7

5													
10	Compound No.	Dose	EC	SE	EL	DI	PA	AB	AM	PO	XA	CY	ZE
15	1	0.5 1 2	5 5 5	5 5 5	5 5 5	5 5 5	555	555	ນນ ນ	555	555	555	000
20	2	0.5 1 2	555	555	555	555	555	555	້ອອອ	5555	5555	5 5 5	0 0 0
25	3	0.5 1 2	555	ភភភភ	ភភភភ	555	555	5 5 5	5 5 5	5 5 5	5 5 5	5 5 5	0
30	4	0.5 1 2	555	555	5 5 5	555	5 5 5	555	5 5 5	5 5 5	5 5 5	5 5 5	0 0
35	6 .	0.5 1 2	555	555	ភភភ	5 5 5	555	5 5 5	555	5 5 5	555	5 5 5	0 0
40	7	0.5 1 2	5 5 5	5 5 5	5 5 5	555	555	5 5 5	5 5 5	5 5 5	5 5 5	5 5 5	0 0
45	8 .	0.5	555	555	555	555	555	5 5 5	555	555	555	555	0 0 0

50

Table 7 (continued)

5			=		Ta	ore 1	1100)						
10	Compound No.	Dose	EC	SE	EL	DI	PA	AB	AM	PO	XA	CY	ZE
15	9	0.5 1 2	5555	សសស	555	555	555	ນ ນນ	555	សសស	ភភភ	ໝວຫ	000
20	10	0.5 1 2	សសស	ຜນຜ	555	555	សសស	നനന	ភភភភ	ധധധ	ກກກ	ຕຜເກ	000
25	11	0.5 1 2	555 5	555	555	555	ភភភភ	ນ ນ ນ	വവവ	555	សលល	ຜດດ	000
30	12	0.5 1 2	សសស	_ວ ວວວ	555	ភភភភ	5 555	សលស	നവന	555	_ເ ນວນ	ກກກ	0 0 0
35	13	0.5	555	555	សសស	ភភភភ	ധധധ	ភភភភ	សសស	555	ភភភភ	555	000
40	14	0.5 1 2	5 5 5	555	555	555	555	ភភភភ	555	សសស	555	5 5 5	000
	15 .	0.5 1 2	5 5 5	5 5 5	5 5 5	555	555	555	សលស	555	555	555	0 0 0

50

Table 7 (continued)

•													
10	Compound No.	Dose	EC	SE	EL	DI	PA	AB	MÆ	PO	XA	CY	ZE .
15	16	0:5 1 2	555	55s	555	555	ភភភភ	5555	555	555	555	5 5 5	0 0
20	17	0.5 1 2.	ភភភភ	555	വവവ	សសស	555	ម ម ម	555	ລຸ້ວວ	555	555	0 0 0
25	18	0.5 1 2	555	555	5 5 5	ເວເວເວ	5 5 5	555	5 5 5	55t5	5 5 5	555	0 0 0
30	19	0.5 1 2	ნნ ნ	ភភភ	555	555	5 5 5	555	555	5 5 5	5 5 5	5 5 5	0 0 0
35	20	0.5 1 2	555	555	5 5 5	555	5 5 5	555	5 5 5	5 5 5	5 5 5	5 5 5	0 0
40	21	0.5 1 2	555	555	5 5 5	555	5 5 5	555	5 5 5	555	555	555	0 0 0
45	22.	0.5 1 2	5 5 5	555	5 5 5	5 5 5	5 5 5	5 5 5	555	555	555	555	0 0 0

Table 7 (continued)

5	

5													
10	Compound No.	Dose	EC	SE	EL	DI	P.4	AB	ΑM	PO	XA	CĂ	ZΞ
15	23	0.5	555	ໝໝເວ	555	5555	555	555	ຜວນ	555 5	5. 5555	ເລເລເລ	0 0 0
20	24	0.5 1 2	សសស	555	555 5	555	ភុភភ	5 5 5	. 5 5 5	555	555	ສຫເວ	0
25	25	0.5 1 2	555	ຜຜຜ	5 5 5	555	555	5 55	555	555	555	5555	0 0
30	26	0.5 1 2	555	555	555	ភភភភ	555	555	555	555	ភភភ	555	0 0
35	27.	0.5 1 2	សសភ	5 5 5	5 5 5	5 5 5	5 5 5	5 5 5	5 5 5	5 5 5	5 5 5	555	0 0 0
40	28	0.5 1 2	₅ 555	555	555	555	ភភភភ	ភភភ	555	555	555	5 5 5	000
45	29	0.5 1 2	555	555	5 5 5	555	555	555	555	555	555	555	0 0

50

Table 7 (continued)

-													
10	Compound No.	Dose	EC	SE	EL	DI	P.4	AB	A.M	PO	X.A.	СÃ	ZE
15	30	0.5 1 2	555	555	555	555 5	555	555	555	555	555	ភភភភ	000
20	34	0.5	555	555	ວ ວວ	555	555	5555	សសស	555	555	555	0 0 0
25	35	0.5 1 2	5555	555	5555	555	5 5 5	555	555	555	555	555	0 0
30	36	0.5 1 2	555	555	555	555	555	555	555	555	555	5 5 5	0 0 0
35	37	0.5 1 2	101015	555	5 5 5	555	555	ភភភភ	555	555 5	555	5 5 5	0 0 0
40	39	0.5	555	5 5 5	5 5 5	555	555	555	555	555	555	5 5 5	0 0 0
45 .	40	0.5 1 ·2	555	555	555	555	555	555	5 5 5	55.5 5	5 5 5	5 5 5	0 0 0

50

Table 7 (continued)

5				:		cie .							
10	Compound No.	Dose	EC	SE	EL	DI	P <u>4</u>	AB	AM	PO	XA	GĂ	ZE
15	41	0.5	555	555	5 5 5	5 5 5	555 5	ສສສ	5555	5555	5555	555	000
20	42	0.5 1 2	_ເ ນຣ _ເ ຣ	555 5	5555	5 5 5	555	5555	5 5 5	5 5 5	5 5 5	5.55	0
25	43	0.5 1 2	₅ 555	5 5 5	5 5 5	555	5 5 5	5 5 5	5 5 5	5 5 5	5 5 5	5 5 5	0 0
30	44	0.5 1 2	, 5555	555	555	555	555	555	555	5 5 5	5 5 5	5 5 5	000
35	45	0.5 1 2	555	555	555	555	555	555	555	555	555	555	000
40	46	0.5 1 2	ເລເລເລ	5 5 5	555	555	5 5 5	5 5 5	555	5 5 5	5 5 5	5 5 5	0 0
45	47	0.5	555	555	555	555	555	555	555	555	5555	5 5 5	0 0 0

50

Table 7 (continued)

٠.													
10	Compound No.	Dose	EC	SE	EL	DI	P <u>4</u>	AB	ΑM	PO	XA	СÃ	ZΕ
15	48	0.5	555	555	555	5555	ຜເນເວ	555	വധവ	ນ ນ ນ	ധധധ	ນ ນ	0 0 0
20	49	0.5 1 2	555 5	ភភភ	5 5 5	555	ຜຜຜ	ຜຜຜ	ភេសស	ເນເນເນ	ຜເວເວ	យលល	0
25	50	0.5	5 5 5	5 5 5	5 5 5	5 5 5	_ເ ນ ເນ ເນ ເນ	555	555	555	555	555	0 0
30	56	0.5 1 2	· 5 5 5	555	5 5 5	555	555	555	555	555	555	555	0 0 0
35	58 ,	0.5 1 2	5 5 5	5 5 5	5 5 5	555	5 5 5	555	555	555	5 5 5	5555	0 0
40	61	0.5 1 2	5 5 5	· 5	5 5 5	555	5 5 5	5 5 5	5 5 5	5 5 5	5 5 5	555	0 0 0
45	63	0.5	5 5 5	5 5 5	555	5 5 5	5 5 5	5 5 5	555	555	555	555	0 0

50

٠5

Table 7 (continued)

5													
10	No.	Dose	EC	SE	EL	DI	P. <u>4</u>	AB	AM	PO	XA	CÃ	ZE
15	64	0.5	ກກກ	ກຫກ	ភេសភ	5555	555	555	໌ສສສ	5 5 5	5 5 5	5 5 5	0 0
20	65	0.5 1 2	555	ភភភភ	555	555	555	555	555	ភភភភ	555	5555	000
25	66	0.5 1 2	555	5 5 5	5 5 5	5 5 5	555	5 5 5	5 5 5	5 5 5	5 5 5	5 5 5	0 0
30	67	0.5 1 2	.555	555	5 5 5	555	555	5 5 5	555	555	5 5 5	5 5 5	000
35	68	0.5 1 2	555	555	555	5 5 5	5 5 5	5 5 5	5 5 5	5 5 5	5 5 5	5 5 5	0 0 0
	Reference Example A	4 8 16	3 4 5	1 2 3	2 3 4	3 4 5	0 1 2	3 5 5	5 5 5	555	4 5 5	0 0 1	0 1 2
	Reference Example B	. 8 16	4 4 5	3 4 5	3 4 5	4 4 5	3 4 5	0 1 2	2 3 4	2 3 4	0 1 2	1 2 3	0 1 2

In Tables 6 and 7, the Comparative Compounds are as follows:

50

Comparative Compound A: Atrazine

Comparative Compound B: Alachlor

$$C_{2}H_{5}$$

$$N < CH_{2}OCH$$

$$CCH_{2}C \mathcal{L}$$

$$II$$

$$C_{2}H_{5} O$$

Claims

5

10

15

20

25

30

1. A pyrazole derivative having the formula:

wherein A is an alkyl group having from 1 to 3 carbon atoms, an alkenyl group having from 2 to 4 carbon atoms or an alkynyl group having from 2 to 4 carbon atoms; B is a hydrogen atom, an alkyl group having from 1 to 3 carbon atoms, a halogen atom, a haloalkyl group having from 1 to 3 carbon atoms, an alkoxyalkyl group having from 1 to 3 carbon atoms, an alkylthio group having from 2 to 4 carbon atoms or an alkoxyarbonyl group having from 2 to 4 carbon atoms; X is an alkyl group having from 1 to 6 carbon atoms, an alkoxy group having from 1 to 6 carbon atoms, a halogen atom, a nitro group, a cyano group, a haloalkyl group having from 1 to 6 carbon atoms, an alkoxyalkyl group having from 2 to 6 carbon atoms, an alkylcarbonyl group having from 2 to 6 carbon atoms, an alkoxycarbonyl group having from 2 to 6 carbon atoms, an alkoxycarbonyl group having from 1 to 6 carbon atoms, an alkoxycarbonyl group having from 1 to 6 carbon atoms, an alkoxycarbonyl group having from 1 to 6 carbon atoms, an alkylthio group having from 1 to 6 carbon atoms, a haloalkoxy group having from 1 to 6 carbon atoms, an alkylthio group having from 1 to 6 carbon

atoms or an alkylthioalkyl group having from 2 to 6 carbon atoms; Y is a -COOR1 group (wherein R1 is a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms, a cycloalkyl group having from 3 to 8 carbon atoms, a cycloalkylalkyl group having from 4 to 8 carbon atoms, an alkynyl group having from 3 to 6 carbon atoms, an alkenyl group having from 2 to 6 carbon atoms, a haloalkyl group having from 1 to 6 carbon atoms, a halocycloalkyl group having from 3 to 8 carbon atoms, a haloalkynyl group having from 3 to 6 carbon atoms, a haloalkenyl group having from 2 to 6 carbon atoms or a phenyl group which may be substituted by alkyl having from 1 to 3 carbon atoms, halogen, nitro or alkoxy having from 1 to 3 carbon atoms), a -COO-L-OR1 group (wherein L is an alkylene group having from 1 to 6 carbon atoms which may be substituted by alkyl having from 1 to 3 carbon atoms, and R1 is as defined above), a -COO-L-R2 group (wherein L is as defined above, and R2 is a phenyl group which may be substituted by alkyl having from 1 to 3 carbon atoms, halogen, nitro or alkoxy having from 1 to 3 carbon atoms), a -COO-M group (wherein M is a 3 to 6-membered alicyclic residue containing not more than 2 sulfur or oxygen atoms and formed by a linkage of from 1 to 4 carbon atoms), a -COO-L-M group (wherein L and M are as defined above), a -COO-L-O-L-R2 group (wherein L and R2 are as defined above), a -COO-L-S(O)_n-R1 group (wherein L and R1 are as defined above, and n is an integer of from 0 to 2), a -CON(R3)(R4) group (wherein each of R3 and R4 is a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms, a cycloalkyl group having from 3 to 8 carbon atoms, a cycloalkylalkyl group having from 4 to 8 carbon atoms, an alkoxy group having from 1 to 6 carbon atoms, an alkynyl group having from 2 to 6 carbon atoms, an alkenyl group having from 2 to 6 carbon atoms, a haloalky! group having from 1 to 6 carbon atoms, a halocycloalky! group having from 3 to 8 carbon atoms, a haloalkynyl group having from 2 to 6 carbon atoms, a haloalkenyl group having from 2 to 6 carbon atoms or a phenyl group which may be substituted by alkyl having from 1 to 3 carbon atoms, halogen, nitro or alkoxy having from 1 to 3 carbon atoms), a

group (wherein n is an integer of from 4 to 6), a

group (wherein R5 is an alkyl group having from 1 to 3 carbon atoms), a

group, a -CONHSO₂CH₃ group, a -CONHSO₂CF₃ group, a -COO-L-N(R3)(R4) group (wherein L, R3 and R4 are as defined above), a -COO-L-CO-R1 group (wherein L and R1 are as defined above), a -COO-L-CO-R1 group (wherein L and R1 are as defined above), a -COO-L-CN group (wherein L is as defined above), a -COO-L-NO₂ group (wherein L is as defined above), a -COO-N=C(R6)(R7) group (wherein each of R6 and R7 which may be the same or different is an alkyl group having from 1 to 3 carbon atoms), a

group (wherein n is an integer of from 4 to 6), a -COO-L-O-SO₂-R1 group (wherein L and R1 are as defined above), a -COO-L-O-CO-R1 group (wherein L and R1 are as defined above), a -COO-L-O-L-O-R1 group (wherein L and R1 are as defined above), a -COO-L-Si(R5)₂ group (wherein L and R5 are as defined above), a -C(O)S-R1 group (wherein R1 is as defined above), a -C(S)O-R1 group (wherein R1 is as defined above), a -CO-R1 group (wherein L and R1 are as defined above), a -L-O-R3 group (wherein L is as defined above, and R8 is a hydrogen atom or an alkyl group

25

40

having from 1 to 6 carbon atoms), a -L-O-M group (wherein L and M are as defined above), a -L-O-L-M group (wherein L and M are as defined above), a -L-NR8R9 group (wherein R8 is as defined above, and R9 is an alkyl group having from 1 to 6 carbon atoms), a -L-O-CH2Ph group (wherein L is as defined above), -L-O-L-COOR9 group (wherein L and R9 are as defined above), a -L-CN group (wherein L is as defined above), a -L-S(O)n-R1 group (wherein L and R1 are as defined above, and n is an integer of from 0 to 2), a -L-S-L-O-R9 group (wherein L and R9 are as defined above), a -L-O-COR9 group (wherein L and R9 are as defined above), a -L-O-SO₂R9 group (wherein L and R9 are as defined above), a -L-COOR8 group (wherein L and R8 are as defined above), a -CH = CHOR8 group (wherein R8 is as defined above) or a -L-O-L-CN group (wherein L is as defined above); Z is a halogen atom, a nitro group, an alkoxy group having from 1 to 3 carbon atoms, a trifluoromethyl group, a cyano group or a -S(0),R10 group (wherein R10 is an alkyl group having from 1 to 3 carbon atoms or a haloalkyl group having from 1 to 3 carbon atoms, and n is an integer of from 0 to 2); V is a hydrogen atom, a halogen atom, an alkyl group having from 1 to 4 carbon atoms or an alkoxy group having from 1 to 4 carbon atoms; W is a hydrogen atom, a halogen atom, an alkyl group having from 1 to 4 carbon atoms, a haloalkyl group having from 1 to 4 carbon atoms, an alkoxy group having from 1 to 4 carbon atoms, an alkoxyalkyl group having from 2 to 6 carbon atoms, an alkoxycarbonyl group having from 2 to 5 carbon atoms, a haloalkoxy group having from 1 to 3 carbon atoms, a nitro group, a cyano group or a -S(O)n-R group (wherein n is as defined above and R is an alkyl group having from 1 to 4 carbon atoms); Q is a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms which may be substituted by halogen, an alkenyl group having from 1 to 6 carbon atoms which may be substituted by halogen, an alkynyl group having from 1 to 6 carbon atoms which may be substituted by halogen, a cyanomethyl group, a -C(O)-R11 group (wherein R11 is a phenyl group which may be substituted by the same or different substituents selected from the group consisting of alkyl having from 1 to 6 carbon atoms, alkenyl having from 1 to 6 carbon atoms, alkynyl having from 1 to 6 carbon atoms, haloalkyl having from 1 to 6 carbon atoms, haloalkenyl having from 1 to 6 carbon atoms, haloalkynyl having from 1 to 6 carbon atoms, halogen, nitro and trifluoromethyl, an alkyl group having from 1 to 6 carbon atoms, an alkoxy group having from 1 to 6 carbon atoms or a hydroxyl group), a -S(O)2R11 group (wherein R11 is as defined above), a -P(O)(OR11)₂ group (wherein R11 is as defined above), a -L-C(O)-R11 group (wherein L and R11 are as defined above), a -L-C(O)-N(R12)(R13) (wherein L is as defined above, each of R12 and R13 is a hydrogen atom or an alkyl group having from 1 to 6 carbon atoms), a -L-R14 group (wherein L is as defined above, R14 is a phenyl group which may be substituted by the same or different substituents selected from the group consisting of halogen, nitro and trifluoromethyl, an alkyl group having from 1 to 6 carbon atoms, an alkoxy group having from 1 to 6 carbon atoms or a hydroxy group), a -L-N(R12)(R13) group (wherein L, R12 and R13 are as defined above), a -L-OR15 group (wherein R15 is a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms or an alkenyl group having from 1 to 6 carbon atoms), a -L-OC(O)R16 group (wherein R16 is an alkyl group having from 1 to 6 carbon atoms or an alkoxy group having from 1 to 6 carbon atoms), a -L-S(O),R15 group (wherein R15 is as defined above, and n is an integer of 0 or 2), a -L-SC(0)R12 group (wherein R12 is as defined above).

(wherein each of L1 and L2 is a methylene group, an oxygen atom or a sulfur atom, R16 is a hydrogen atom or an alkyl group having from 1 to 3 carbon atoms, and n is an integer of 2 or 3), and a salt thereof.

2. The pyrazole derivative according to Claim 1, wherein A, B, X, Y, Z and Q in the formula I are respectively selected from the following substituents:

A: Me, Et, n-Pr, i-Pr, CH₂CH = CH₂, CH₂C=CH

B: H, Me, Et, n-Pr, i-Pr, C1, Br, CH₂C1, CF₃, OMe, OEt, OPr-i, SMe, CH₂OMe, CH₃SMe, CO₂Me, CO₂Et X: Me, Et, n-Pr, i-Pr, n-Bu, i-Bu, s-Bu, t-Bu, OMe, OEt, OPr-n, OPr-i, OBu-n, OBu-i, OBu-s, OBu-t, F, C1, Br, I, NO₂, CN, CH₂F, CHF₂, CH₂CF₃, CH₂CF₃, CH₂C1, CC1₃, CHC1Me, CH₂CH₂C1, CHC1CH₂C1, CH₂Br, CHBrMe, CH₂CH₂Br, CH₂OMe, CH₂OEt, CH₂OPr-n, CH₂OPr-i, CH₂OBu-n, CH₂OBu-i, CH₂OBu-s, CH₂OBu-t, CHMeOMe, CHMeOEt, CHMeOPr-n, CHMeOPr-i, CHMeOBu-n, CHMeOBu-i, CHMeOBu-s, CHMeOBu-t, CH₂CH₂OMe, CH₂CH₂OEt, CH₂CH₂OPr-i, Ac, COEt, COPr-n, COPr-i, COOMe, COOEt, COOPr-i, CONHMe, CONHEt, CONMe₂, CONEtMe, OCHF₂, OCF₃, OCH₂CF₃, SMe, SEt, CH₂SMe, CH₂SEt, CHMeSMe,

40

45

CHMeSEt

5

10

15

20

45

55

Y : CH₂OH, CH₂OMe, CH₂OEt, CH₂OPr-n, CH₂OPr-i, CH₂OBu-n, CH₂OBu-i, CH₂OBu-s, CH₂OBu-t, CH₂OAm-n, CH₂OAm-i, CH₂OAM-t,

$$CH_2OC_6H_{12-\Pi}$$
, CH_2O , CH_2O . $CH_2OCH = CH_2$,

CH₂O
$$\longrightarrow$$
 , CH₂O \longrightarrow , CH₂O \longrightarrow , CH₂O \longrightarrow , CH₂O \longrightarrow , CH₂O CH₂ \longrightarrow ,

CH₂OPh, CH₂OPH-C1-4, CH₂OPh-NO₂-4, CH₂NHMe, CH₂NHEt, CH₂NMe₂, CH₂NEt₂, CH₂NEtMe, CH₂OCH₂Ph, CH₂OCH₂COOMe, CH₂OCH₂COOEt, CH₂OCHMeCOOMe, CH₂OCH₂COOBu-t, CH₂OCHMeCOOEt, CH₂CN, CH₂SMe, CH₂SEt, CH₂SPr-n, CH₂SPr-i, CH₂SBn-t, CH₂SCH₂CH = CH₂, CH₂SCH₂C≡CH,

 $CHMeOCH = CH_2$, $CHMeOCH_2CH = CH_2$, $CHMeOCH_2C=CH$, $CHMeOCH_2CF_3$,

$$\begin{array}{c|c} C & \mathcal{Q} \\ \hline C & \text{CHMeOCH}_{\mathcal{Z}} & \hline \\ \end{array}$$

CHMeOCH2CH2OMe, CHMeOCH2CH2Et,

CHMeOPh, CHMeNHMe, CHMeNMe₂, CHMeNEt₂, CHMeOCH₂COOMe, CHMeOCH₂COOEt, CHMeOCH-MeCOOMe, CHMeCN, CHMeSMe, CHMeSEt, CHMeSPr-n, CHMeSPr-i, CHMeSCH₂CH = CH₂, CHMeSCH₂C=CH,

25

5

15

CHMeSOEt. CHMeSCH₂CH₂Ct, CHMeSOMe. CHMeSO₂Me, CHMeSO₂Et, CHMeSO₂Pr-i, CHMeSCH₂CH₂OMe, CHMeSPh. CHMeOAc. CHMeOCOEt, CHMeOSO₂Me, CHMeOSO₂Et, CMe₂OMe, CMe₂OEt, CMe₂OPr-n, CMe₂OPr-i, CMe₂OCH = CH₂, CHMeOCH,CH,CN. CMe₂OH. CMe₂OCH₂CH = CH₂, CMe₂OCH₂C=CH, CMe₂OCH₂CH₂C1,

35

40 CMe₂OCH₂COOMe, CMe₂CN, CMe₂SMe, CMe₂SEt, CMe₂SO₂Me, CMe₂SO₂Et, CMe₂OAC, CMe₂OSO₂Me, CH₂COOMe, CH₂COOMe, CH₂COOMe, CH₂COOMe, CH₂COOMe, CH₂COOEt, CH₂COOPr-i, CH = CHOMe, CH = CHOEt, CH = CHOPr-i, COOH, COOMe, COOEt, COOPr-n, COOPr-i, COOBu-s, COOBu-i, COOBu-t, COOAm-i,

50

45

55 COOCH₂CH = CH₂, COOCH₂C=CH, COOCH₂CMe = CH₂, COOCH₂CH₂Br, COOCH₂CH₂Ct COOCH₂CH₂F, COOCH₂CCt₃, COOCH₂CH₅C, COOCH₂CH₅C, COOCH₂CH₅C, COOCH₂CH₅C, COOCH₂CH₅C, COOCH₂CH₅C, COOCH₂CH₅C, COOCH₂CH₅C, COOCH₂CH₅C, COOCH₂CH₅C, COOCH₂CH₅C, COOCH₂CH₅C, COOCH₂CH₅C, COOCH₂CH₅C, COOCH₅CH₅C, COOCH₅C, CO

5

COOCH2CC! = CH2, COOCH2CC! = CHC!, COOCH2OMe, COOCH2CH2OMe, COOCH2CH2OEt, COOCH2OEt, COOCH2CH2SMe, COOCH2CH2SEt, COOCH2CH2SCH2CH2Ct. COOCH₂SMe, COOCH₂SOMe, COOCH2CH2OCH2CH2C1, COOCH, CH, SOMe, COOCH₂CH₂OCH₂CH₂Br, COOCH2CH2OSO2Me, COOCH₂CH₂OSO₂Ph-Me-4, COOCH2OCH2CH2OMe, COOCH2CH2SO2Me, COOCH2CH2SO2Et, COOCH2O2Me, COOCH2CH, COOCH2CH2CH2CN, COOCH2CH2CH2CN, COOCH2CH2NHMe, COOCH2CH2NMe2, COOCH2NMe2, COOCH2CH2NO2, COOCH2CH2CH2NO2, COOCH2OH,

15

COOCH₂COMe, COOCH₂COBu-t, COOCH₂COPr-i, COOCH₂COPh, COOCH₂COOMe, COOCH₂COOEt, COOCHMeCOOMe, COOCH₂COMe, COOCH₂CH₂OCH₂CH = CH₂, COOCH₂CH₂OCH₂C=CH, COOCH₂CH₂OPh, COOCH₂CH₂OPh, COOCH₂CH₂OCH₂Ph, COOCH₂SiMe₃, COOSiMe₃, COOSiEt₃, COOPh, COOPh-Ct-4, COOPh-Me-4, COOPh-NO₂-4, COOCH₂Ph, COOCH₂Ph-Ct-2, COOCH₂Ph-Ct-4, COOCHMePh, COOCH₂CH₂Ph,

30

c00 \(\sqrt{0} \)

coo - s

COOCH 2

COOCH₂

35

40

C(O)SMe, C(O)SPr-i, C(O)SPr-n, C(O)SBu-n, C(O)SBu-t, C(O)SBu-s, C(O)SBu-i, C(S)OMe, C(S)OEt, C(S)OPr-i, C(S)OPr-n, C(S)OBu-n, C(S)OBu-t, C(S)OBu-s, C(S)OBu-i, CSSMe, CSSEt, CSSPr-n, CSSPr-i, CONMe₂, CONHMe, CONEt₂, CONHEt, CONHPr-n, CONHPr-i, CONHBu-t, CONHBu-s, CONHBu-i, CONHBu-n, CQNHAm-t, CONPr₂-i, CONPr₂-n, CONHPh, CONHPh-Me-4, CONHPh-NO₂-4,

50

CON

30

55

CONMeOMe, CONHCH₂CH = CH₂, CON(CH₂CH = CH₂)₂, CONHCH₂C=CH, CON(CH₂C=CH)₂, CONMePh,

CONEtPh, CON(Me)Ph-Me-4, CONHSO2Me, CONHSO2CF3, COON = CMe2,

$$COON = \bigcirc$$
, $COON = \bigcirc$,

COOCH2OCOMe, COOCH2OCOBu-t.

Z: F. Ct, Br, I. NO₂, OMe, OEt, OPr-n, OPr-i, CF₃, CN, SMe, SOMe, SO₂Me, SCF₃, SO₂CF₃ Q: H. Me, Et, n-Pr, i-Pr, n-Bu, i-Bu, s-Bu, t-Bu, CH₂CH₂Ct, CH₂CF₃, CHCtMe, CH₂CH₃Br, CHCtCH₂Ct, CH₂CH = CH₂, CH₂CMe = CH₂, CH₂CH = CHMe, CH₂C=CH, CH₂CCt = CH₂, CH₂CN, CH₂Ph, CH₂Ph-Ct-2, CH₂Ph-Ct-3, CH₂Ph-Me-2,

20

35

45

55

5

10

15

CH₂Ph-Me₂-2,4, CH₂Ph-Me-4, CHMePh, CHEtPh, CH₂Ph-NO₂-2, CH₂Ph-CF₃-3, CH₂OMe, CH₂OEt, CH₂OH, CHMeOH, CH₂NHMe, CH₂NMe₂, CHMeNMe₃, CH₂COPh, CH₂COPh-NO₂-4, CH₂COPh-Me-4, CH₂COPh-Ct₂-4, CH₂COPh-Me₂-2,4, CH₂COPh-CF₃-4, CH₂AC, CH₂COEt, CHMeAC, CH₂CO₂Me, CH₂CO₂Et, CH₂CO₂Pr-n, CH₂CO₂Pr-i, CH₂CO₂Bu-t, CH₂CO₂H, CHMeCO₂H, CH₂CONHMe, CH₃CONMe₂, CH₂CONHEt, CH₂CONEt₂, CH₂CONPr-n₂, CH₂OC₃Et, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂CO₂Pr-i, CH₂NHCO₂Pr-i, CH₂NHCO₂Pr-i, CH₂NHCO₂Pr-i, CH₂NHCO₂Pr-i, CH₂NHCO₂Pr-i, COPh-Ct₂-2,4, Ac, COEt, COPr-n, COPr-i, COBu-n, COBu-t, COCH₂Ct, COCHCt₂, COCCt₃, COCF₃, COCH₂OMe, COCH₂OPh, COCH₂CH = CHCH₃, CO₂Me, CO₂Et, CO₂Bu-t, CO₂Pr-i, CONHMe, CONMe₂, CONHEt, CONEt₂, CONPr-n₂, CON(CH₂CH = CH₂)₂, CONMePh,

CO₂CH₂Ph, CO₂Ph, SO₂Me, SO₂Et, SO₂CH₂CH = CH₂, SO₂Ph, SO₂Ph-Me-4, SO₂Ph-Ct-4, SO₂Ph-(NO₂)₂-2,4, SO₂CF₃, P(=0)(OMe)₂, P(=0)(OEt)₂, P(=0)(OPr-n)₂, P(=0)(OPr-i)₂, P(=S)(OMe)₂, P(=S)(OEt)₂, P(=O)-OMeOPh, P(=0)(OCH₂CH = CH₂)₂, P(=O)OPhOCH₂CH = CH₂

3. The pyrazole derivative according to Claim 1, wherein V and W are hydrogen atoms, and A, B, X, Y, Z and Q in the formula I are respectively selected from the following substituents:

A: Me, Et.·n-Pr, i-Pr, CH2CH = CH2, CH2C=CH

B : H, Me,

X: Me, Et, i-Pr, OMe, OEt, OPr-i F, C1, Br, I, NO2, CN, OBu-t, CF3 CH2OMe, Ac, COOMe, COOEt, COOPr-i, OCH5, OCF3, OCH3CF3, SMe, CH2SMe,

Z: F, Ct, Br, I, NO2, OMe, CF3, CN, SMe, SOMe, SO2Me, SCF3, SOCF3, SO2CF3

Q: H, -CH₂Ph, CH₂COPh, SO₂(4-Me-phenyl) CH₂OC(O)Bu-t, CH₂COMe, CH₂OMe, CH₂CO(4-Me-phenyl), CH₂COOH

4. The pyrazole derivative according to Claim 1, wherein V and W are hydrogen atoms, and A, B, X, Y, Z and Q in the formula I are respectively selected from the following substituents:

A : Me, Et, n-Pr, i-Pr, CH₂CH = CH₂, CH₂C≡CH

B: H, Me,

X: Me, Et, i-Pr, OMe, OEt, OPr-i F, Ct, Br, I, NO2, CN, OBu-t, CF3, CH2OMe, Ac, COOMe, COOEt, COOPr-i, OCH5, OCF3, OCH2CF3, SMe, CH2SMe,

Y: COOMe, COOEt, COOPr-n, COOPr-i, COOBu-t, COOAm-i, COOCH2CH=CH2, COOCH2C=CH, COOCH2CH2CL COOCH2CF3, COOCH2CH2OMe, COOCH2CH2CN COOCH2COOMe, COOCH2COOEt, COOCH2COOPr-i, COOCH2COOBu-t, CONME2, COON=CMe2, CH2COOMe, CH2COOEt, CH2CH2COOMe, CH2CH2COOEt, CH=CHOMe, CH=CHOEt

Z: F, C1, Br, I, NO2, OMe, CF3, CN, SMe, SOMe, SO2Me, SCF3, SOCF3, SO2CF3

Q: H, -CH₂Ph, CH₂COPh, SO₂(4-Me-Phenyl) CH₂OC(O)Bu-t, CH₂COMe, CH₂OMe, CH₂CO(4-Me-Phenyl), CH₂COOH

5. The pyrazole derivative according to Claim 1, which has the formula:

25

20

15

5

wherein A is an alkyl group having from 1 to 3 carbon atoms; B is a hydrogen atom or a methyl group; X is an alkyl group having from 1 to 3 carbon atoms, an alkoxy group having from 1 to 3 carbon atoms or a halogen atom; Y is an alkoxycarbonyl group having from 1 to 3 carbon atoms, a -CH₂-O-R group (wherein R is an alkyl group having from 1 to 3 carbon atoms) or a -CH(CH₃)-O-R group (wherein R is as defined above); Z is a -S(O)_nCH₃ group (wherein n is an integer of from 0 to 2); V and W are hydrogen atoms; and Q is a hydrogen atom, a benzyl group, a phenacyl group or a tosyl group, and a salt thereof.

6. The pyrazole derivative according to Claim 1, which is 5-hydroxy-4-(4-methanesulfonyl-3-methoxymethyl-2-methylbenzoyl)-1-methylpyrazole, 1-ethyl-5-hydroxy-4-(4-methanesulfonyl-3-methoxymethyl-2-methylbenzoyl)pyrazole, 5-hydroxy-1-isopropyl-4-(4-methanesulfonyl-3-methoxymethyl-2-methylbenzoyl)pyrazole. 5-hydroxy-4-(4-methanesulfonyl-3-methoxycarbonyl-2-methylbenzoyl)-1-methylpyrazole, 1-ethyl-5-hydroxy-4-(4-methanesulfonyl-3-methoxycarbonyl-2-methylbenzoyl)pyrazole, 4-(3-ethoxycarbonyl-4-methanesulfonyl-2-methylbenzoyl)-5-hydroxy-1-methylpyrazole, 4-(3-ethoxycarbonyl-4-methanesulfonyl-2-methylbenzoyl)-1-ethyl-5-hydroxypyrazole, 5-hydroxy-4-(3-isopropoxycarbonyl-4-methanesulfonyl-2-methylbenzoyl)-1-methylpyrazole, 1-ethyl-5-hydroxy-4-(3-isopropoxycarbonyl-4-methanesulfonyl-2-methylbenzoyl)pyrazole, 4-(2,4-dichloro-3-methoxycarbonylbenzoyl)-5-hydroxy-1-methylpyrazole, 4-(3-ethoxymethyl-4-methanesulfonyl-2-methylbenzoyl)-5-hydroxy-1-methylpyrazole, 4-(3-ethoxymethyl-4-methanesulfonyl-2-methylbenzoyi)-1-ethyl-5-hydroxypyrazole, 4-(3-ethoxymethyl-4-methanesulfonyl-2-methylbenzoyl)-5-hydroxy-1-isopropylpyrazole, 1,3-dimethyl-4-(3-ethoxymethyl-4-methanesulfonyl-2-methylbenzoyl)-5-hydroxypyrazole, 5-hydroxy-4-[4-methanesulfonyl-3-(1-methoxyethyl)-2-methylbenzoyl]-1-methylpyrazole, 1-ethyl-5-hydroxy-4-[4-methanesulfonyl-3-(1-methoxyethyl)-2-methylbenzoyl]pyrazole, 4-(2-chloro-4-methanesulfonyl-3-methoxymethylbenzoyl)-5-hydroxy-1-methylpyrazole,

4-(2-chloro-4-methanesulfonyl-1-methoxymethylbenzoyl)-1-ethyl-5-hydroxypyrazole,
4-(2-chloro-4-methanesulfonyl-1-methoxymethylbenzoyl)-5-hydroxy-1-isopropylpyrazole,
1-ethyl-5-hydroxy-4-(3-isopropoxymethyl-4-methanesulfonyl-2-methylbenzoyl)pyrazole,
5-hydroxy-4-[4-methanesulfonyl-3-(2-methoxyethyl)oxycarbonyl-2-methylbenzoyl]-1-methylpyrazole,
1-ethyl-5-hydroxy-4-[4-methanesulfonyl-3-(2-methoxyethyl)oxycarbonyl-2-methylbenzoyl]pyrazole,

- 4-[2-chloro-4-methanesulfonyl-3-(2-methoxyethyl)oxymethylbenzoyl)-5-hydroxy-1-methylpyrazole,
- 4-(2-chloro-3-ethylthiomethyl-4-methanesulfonylbenzoyl)-1-ethyl-5-hydroxypyrazole,
- 4-(2-chloro-3-ethanesulfinyl-4-methanesulfonylbenzoyl)-1-ethyl-5-hydroxypyrazole,
- 4-(2-chloro-3-ethanesulfonyl-4-methanesulfonylbenzoyl)-1-ethyl-5-hydroxypyrazole,
- 1-ethyl-5-hydroxy-4-(3-n-propoxycarbonyl-4-methanesulfonyl-2-methylbenzoyl)pyrazole,
 - 4-(2-chloro-4-methanesulfonyl-3-methoxycarbonylbenzoyl)-5-hydroxy-1-methylpyrazole,
 - 4-(2-chloro-4-methanesulfonyi-3-methoxycarbonylbenzoyi)-1-ethyl-5-hydroxypyrazole.
 - 4-(2-chloro-4-methanesulfonyl-3-methoxycarbonylbenzoyl)-5-hydroxy-1-isopropylpyrazole,
 - 4-[2-chloro-4-methanesulfonyl-3-(3-propargyl)oxymethylbenzoyl]-1-ethyl-5-hydroxypyrazole,
- 5-hydroxy-4-(4-methanesulfonyl-2-methoxy-3-methoxycarbonylbenzoyl)-1-methylpyrazole,
 - 4-(2-chloro-4-methanesulfonyl-3-isopropoxycarbonylbenzoyl)-5-hydroxy-1-methylpyrazole,
 - 4-(2-chloro-4-methanesulfonyl-3-isopropoxycarbonylbenzoyl)-1-ethyl-5-hydroxypyrazole,
 - 4-[2-chloro-4-methanesulfonyi-3-(2.2.2-trifluoroethyl)oxymethylbenzoyl]-5-hydroxy-1-methylpyrazole,
 - 5-hydroxy-1-isopropyl-4-(4-methanesulfonyl-3-methoxycarbonyl-2-methylbenzoyl)pyrazole,
- 5 5-hydroxy-4-(4-methanesulfonyl-2-methoxy-3-methoxymethylbenzoyl)-1-methylpyrazole,
 - 4-[3-(2-chloroethyl)oxycarbonyl-4-methanesulfonyl-2-methylbenzoyl]-1-ethyl-5-hydroxypyrazole,
 - 1-ethyl-5-hydroxy-4-(4-methanesulfonyl-2-methoxy-3-methoxycarbonylbenzoyl)pyrazole,
 - 4-(2.4-dichloro-3-methoxycarbonyibenzoyl)-1-ethyl-5-hydroxypyrazole.
 - 4-(2.4-dichloro-3-methoxycarbonylbenzoyl)-5-hydroxy-1-isopropylpyrazole,
- 4-(2-chloro-3-cyanomethyl-4-methanesulfonylbenzoyl)-1-ethyl-5-hydroxypyrazole,
 - 4-(2-chloro-3-hydroxymethyl-4-methanesulfonylbenzoyl)-1-ethyl-5-hydroxypyrazole,
 - 4-(2.4-dichloro-3-methoxymethylbenzoyl)-1-ethyl-5-hydroxypyrazole,
 - 4-(2.4-dichloro-3-methoxymethylbenzoyl)-5-hydroxy-1-methylpyrazole,
 - 4-[2-chloro-4-methanesulfonyl-3-(2-methoxyvinyl)benzoyl]-1-ethyl-5-hydroxypyrazole,
 - 5-benzyloxy-4-(2,4-dichloro-3-methoxycarbonylbenzoyl)-1-ethylpyrazole,
 - 5-benzyloxy-4-(2.4-dichloro-3-methoxycarbonylbenzoyl)-1-isopropylpyrazole,
 - 4-(2-chloro-3-ethoxycarbonyl-4-methanesulfonylbenzoyl)-1-ethyl-5-hydroxypyrazole,
 - 4-(2-chloro-3-ethoxycarbonyl-4-methanesulfonylbenzoyl)-5-hydroxy-1-isopropylpyrazole or
 - 4-(2-chloro-3-ethoxycarbonyl-4-methanesulfonylbenzoyl)-5-hydroxy-1-methylpyrazole.
 - 7. A selective herbicidal composition comprising a herbicidally effective amount of a pyrazole derivative of the formula I as defined in Claim 1 or its salt and an agricultural carrier or diluent.
 - 8. A method for controlling weeds, which comprises applying a herbicidally effective amount of a pyrazole derivative of the formula I as defined in Claim 1 or its salt to a locus to be protected.
 - 9. A process for producing a pyrazole derivative having the formula:

wherein A is an alkyl group having from 1 to 3 carbon atoms, an alkenyl group having from 2 to 4 carbon atoms or an alkynyl group having from 2 to 4 carbon atoms; B is a hydrogen atom, an alkyl group having from 1 to 3 carbon atoms, an alkoxy group having from 1 to 3 carbon atoms, an alkoxyalkyl group having from 1 to 3 carbon atoms, an alkoxyalkyl group having from 2 to 4 carbon atoms, an alkylthioalkyl group having from 2 to 4 carbon atoms or an alkoxycarbonyl group having from 2 to 4 carbon atoms; X is an alkyl group having from 1 to 6 carbon atoms, an alkoxy group having from 1 to 6 carbon atoms, a halogen atom, a nitro group, a cyano group, a haloalkyl group having from 1 to 6 carbon atoms, an alkoxyalkyl group having from 2 to 6 carbon atoms, an alkoxycarbonyl group having from 2 to 6 carbon atoms, an alkoxycarbonyl group having from 2 to 6 carbon atoms, an alkoxycarbonyl group having from 1 to 6 carbon atoms, an alkoxycarbonyl group having from 1 to 6 carbon atoms, an alkoxycarbonyl group having from 1 to 6 carbon atoms, an alkylcarbonyl group substituted independently by hydrogen or alkyl having from 1 to 6 carbon

30

35

40

45

atoms, a haloalkoxy group having from 1 to 6 carbon atoms, an alkylthio group having from 1 to 6 carbon atoms or an alkylthioalkyl group having from 2 to 6 carbon atoms; Y is a -COOR1 group (wherein R1 is a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms, a cycloalkyl group having from 3 to 8 carbon atoms, a cycloalkylalkyl group having from 4 to 8 carbon atoms, an alkynyl group having from 3 to 6 carbon atoms, an alkenyl group having from 2 to 6 carbon atoms, a haloalkyl group having from 1 to 6 carbon atoms, a halocycloalkyl group having from 3 to 8 carbon atoms, a haloalkynyl group having from 3 to 6 carbon atoms, a haloalkenyl group having from 2 to 6 carbon atoms or a phenyl group which may be substituted by alkyl having from 1 to 3 carbon atoms, halogen, nitro or alkoxy having from 1 to 3 carbon atoms), a -COO-L-OR1 group (wherein L is an alkylene group having from 1 to 6 carbon atoms which may be substituted by alkyl having from 1 to 3 carbon atoms, and R1 is as defined above), a -COO-L-R2 group (wherein L is as defined above, and R2 is a phenyl group which may be substituted by alkyl having from 1 to 3 carbon atoms, halogen, nitro or alkoxy having from 1 to 3 carbon atoms), a -COO-M group (wherein M is a 3 to 6-membered alicyclic residue containing not more than 2 sulfur or oxygen atoms and formed by a linkage of from 1 to 4 carbon atoms), a -COO-L-M group (wherein L and M are as defined above), a -COO-L-O-L-R2 group (wherein L and R2 are as defined above), a -COO-L-S(O)n-R1 group (wherein L and R1 are as defined above, and n is an integer of from 0 to 2), a -CON(R3)(R4) group (wherein each of R3 and R4 is a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms, a cycloalkyl group having from 3 to 8 carbon atoms, a cycloalkylalkyl group having from 4 to 8 carbon atoms, an alkoxy group having from 1 to 6 carbon atoms, an alkynyl group having from 2 to 6 carbon atoms, an alkenyl group having from 2 to 6 carbon atoms, a haloalkyl group having from 1 to 6 carbon atoms, a halocycloalkyl group having from 3 to 8 carbon atoms, a haloalkynyl group having from 2 to 6 carbon atoms, a haloalkenyl group having from 2 to 6 carbon atoms or a phenyl group which may be substituted by alkyl having from 1 to 3 carbon atoms, halogen, nitro or alkoxy having from 1 to 3 carbon atoms), a

25

group (wherein n is an integer of from 4 to 6), a

35

group (wherein R5 is an alkyl group having from 1 to 3 carbon atoms), a

40

group, a -CONHSO₂CH₃ group, a -CONHSO₂CF₃ group, a -COO-L-N(R3)(R4) group (wherein L, R3 and R4 are as defined above), a -COO-L-CO-R1 group (wherein L and R1 are as defined above), a -COO-L-CN group (wherein L is as defined above), a -COO-L-NO₂ group (wherein L is as defined above), a -COO-L-NO₂ group (wherein L is as defined above), a -COO-N=C(R6)(R7) group (wherein each of R6 and R7 which may be the same or different is an alkyl group having from 1 to 3 carbon atoms), a

50

group (wherein n is an integer of from 4 to 6), a -COO-L-O-SO₂-R1 group (wherein L and R1 are as defined above), a -COO-L-O-CO-R1 group (wherein L and R1 are as defined above), a -COO-L-O-L-O-R1 group (wherein L and R1 are as defined above), a -COO-L-Si(R5)₂ group (wherein L and R5 are as defined above), a -C(O)S-R1 group (wherein R1 is as defined above), a -C(S)O-R1 group (wherein R1 is as defined above), a -L-O-R1 group (wherein L and R1 are as defined

above), a -L-O-L-O-R8 group (wherein L is as defined above, and R8 is a hydrogen atom or an alkyl group having from 1 to 6 carbon atoms), a -L-O-M group (wherein L and M are as defined above), a -L-O-L-M group (wherein L and M are as defined above), a -L-NR8R9 group (wherein R8 is as defined above, and R9 is an alkyl group having from 1 to 6 carbon atoms), a -L-O-CH2Ph group (wherein L is as defined above), -L-O-L-COOR9 group (wherein L and R9 are as defined above), a -L-CN group (wherein L is as defined above), a -L-S(O)n-R1 group (wherein L and R1 are as defined above, and n is an integer of from 0 to 2), a -L-S-L-O-R9 group (wherein L and R9 are as defined above), a -L-O-COR9 group (wherein L and R9 are as defined above), a -L-O-SO₂R9 group (wherein L and R9 are as defined above), a -L-COOR8 group (wherein L and R8 sre as defined above), a -CH = CHOR8 group (wherein R8 is as defined above) or a -L-O-L-CN group (wherein L is as defined above); Z is a halogen atom, a nitro group, an alkoxy group having from 1 to 3 carbon atoms, a trifluoromethyl group, a cyano group or a -S(O), R10 group (wherein R10 is an alkyl group having from 1 to 3 carbon atoms or a haloalkyl group having from 1 to 3 carbon atoms, and n is an integer of from 0 to 2); V is a hydrogen atom, a halogen atom, an alkyl group having from 1 to 4 carbon atoms or an alkoxy group having from 1 to 4 carbon atoms; W is a hydrogen atom, a halogen atom, an alkyl group having from 1 to 4 carbon atoms, a haloalkyl group having from 1 to 4 carbon atoms, an alkoxy group having from 1 to 4 carbon atoms, an alkoxyalkyl group having from 2 to 6 carbon atoms, an alkoxycarbonyl group having from 2 to 5 carbon atoms, a haloalkoxy group having from 1 to 3 carbon atoms, a nitro group, a cyano group or a -S(O)n-R group (wherein n is as defined above and R is an alkyl group having from 1 to 4 carbon atoms); Q is a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms which may be substituted by halogen, an alkenyl group having from 1 to 6 carbon atoms which may be substituted by halogen, an alkynyl group having from 1 to 6 carbon atoms which may be substituted by halogen, a cyanomethyl group, a -C(O)-R11 group (wherein R11 is a phenyl group which may be substituted by the same or different substituents selected from the group consisting of alkyl having from 1 to 6 carbon atoms, alkenyl having from 1 to 6 carbon atoms, alkynyl having from 1 to 6 carbon atoms, haloalkyl having from 1 to 6 carbon atoms, haloalkenyl having from 1 to 6 carbon atoms, haloalkynyl having from 1 to 6 carbon atoms, halogen, nitro and trifluoromethyl, an alkyl group having from 1 to 6 carbon atoms, an alkoxy group having from 1 to 6 carbon atoms or a hydroxyl group), a -S(O)₂R11 group (wherein R11 is as defined above), a -P(O)(OR11)₂ group (wherein R11 is as defined above), a -L-C(O)-R11 group (wherein L and R11 are as defined above), a -L-C(0)-N(R12)(R13) (wherein L is as defined above, each of R12 and R13 is a hydrogen atom or an alkyl group having from 1 to 6 carbon atoms), a -L-R14 group (wherein L is as defined above, R14 is a phenyl group which may be substituted by the same or different substituents selected from the group consisting of halogen, nitro and trifluoromethyl, an alkyl group having from 1 to 6 carbon atoms, an alkoxy group having from 1 to 6 carbon atoms or a hydroxy group), a -L-N(R12)(R13) group (wherein L, R12 and R13 are as defined above), a -L-OR15 group (wherein R15 is a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms or an alkenyl group having from 1 to 6 carbon atoms), a -L-OC(O)R16 group (wherein R16 is an alkyl group having from 1 to 6 carbon atoms or an alkoxy group having from 1 to 6 carbon atoms), a -L-S(O),R15 group (wherein R15 is as defined above, and n is an integer of 0 or 2), a -L-SC(O)R12 group (wherein R12 is as defined above),

(wherein each of L1 and L2 is a methylene group, an oxygen atom or a sulfur atom, R16 is a hydrogen atom or an alkyl group having from 1 to 3 carbon atoms, and n is an integer of 2 or 3), and a salt thereof, which comprises:

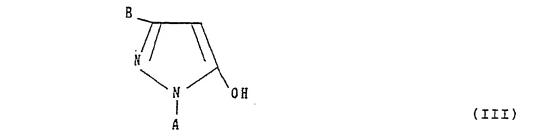
(a) reacting a benzoic acid of the formula:

55

40

45

wherein X, Y, Z, V and W are as defined above, with a 5-hydroxypyrazole of the formula:



wherein A and B are as defined above, to obtain a compound of the formula I wherein Q is a hydrogen atom;

(b) rearranging a compound of the formula:

wherein A, B, X, Y, Z, V and W are as defined above, to obtain a compound of the formula I wherein Q is a hydrogen atom;

(c) condensing a 4-benzoyl-5-hydroxypyrazole of the formula:

wherein A, B, X, Y, Z, V and W are as defined above, with a condensing agent of the formula E-Q' wherein E is a halogen atom, a methanesulfonic acid group or a p-toluenesulfonic acid group and Q' is Q as defined above other than a hydrogen atom, to obtain a compound of the formula I wherein Q is as defined above other than a hydrogen atom; or

(d) condensing a 4-benzoyl-5-chloropyrazole of the formula:

15

20

25

30

$$\begin{array}{c|c}
B & O & C & V & W \\
N & C & Q & W
\end{array}$$

(VI)

wherein A, B, X, Y, Z, V and W are as defined above, with a condensing agent of the formula HOQ wherein Q is as defined above, to obtain a compound of the formula I.



Europäisches Patentamt European Patent Office Office européen des brevets



(1) Publication number:

0 282 944 A3

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: 88103999.4

2 Date of filing: 14.03.88

(i) Int. Cl.⁵: **C07D 231/24**, C07D 231/30, C07D 231/32, C07D 231/20, C07D 405/12, C07D 409/12, C07F 9/65, C07F 7/08, A01N 43/56, A01N 57/16, A01N 55/00, //C07C149/40, C07C147/107,C07C63/68, C07C149/247

(30) Priority: 17.03.87 JP 61937/87 17.07.87 JP 179797/87 30.09.87 JP 247601/87 13.01.88 JP 5449/88

- Date of publication of application: 21.09.88 Bulletin 88/38
- Designated Contracting States:
 AT BE CH DE ES FR GB GR IT LI LU NL SE
- Bate of deferred publication of the search report: 09.10.91 Bulletin 91/41
- Applicant: NISSAN CHEMICAL INDUSTRIES LTD.
 7-1, 3-chome Kanda-Nishiki-cho
 Chiyoda-ku Tokyo(JP)
- Inventor: Baba, Masatoshi Copo Yamaichi 203, Hon-machi Wako-shi Saitama-ken(JP) Inventor: Kakuta, Takuya

5-17-304, Narashino 1-chome Funabashi-shi Chiba-ken(JP)

Inventor: Tanaka, Norio 788-74, Kowagama

Funabashi-shi Chiba-ken(JP)

Inventor: Oya, Eiichi

Nissan Kagaku Kogyo Yatsu-ryo 5-32-9,

Yatsu

Narashino-shi Chiba-ken(JP)

Inventor: Ikai, Takashi

19-7, Nishishinjuku 7-chome

Shinjuku-ku Tokyo(JP)

Inventor: Nawamaki, Tsutomu

7-3-102, Oto 6-chome

Yono-shi Saitama-ken(JP)

Inventor: Watanabe, Shigeomi

14-46-103, Higashiomiya 3-chome

Omiya-shi Saitama-ken(JP)

⁷⁴ Representative: Wächtershäuser, Günter, Dr.

Tal 29

W-8000 München 2(DE)

- Pyrazole derivative and herbicide containing it.
- 9
 - 1. A pyrazole derivative having the formula:

P 0 282 944 A3

EP 0 282 944 A3

wherein A is alkyl, alkenyl or alkynyl; B is hydrogen, alkyl, halogen, haloalkyl, alkoxy, alkylthio, alkoxyalkyl, alkylthioalkyl or alkoxycarbonyl; X is alkyl, alkoxy, halogen, nitro, cyano, haloalkyl, alkoxyalkyl, alkylcarbonyl, alkoxycarbonyl, aminocarbonyl substituted by hydrogen or alkyl, haloalkoxy, alkylthio or alkylthioalkyl; Y is -COOR1 (wherein R1 is hydrogen, alkyl, etc.), -COO-L-OR1 (wherein L is alkylene which may be substituted), -COO-L-R2 (wherein R2 is phenyl group which may be substituted), -COO-M (wherein M is 3 to 6-membered alicyclic residue containing not more than 2 sulfur or oxygen atoms), -COO-L-M, -COO-L-O-L-R2, -COO-L-S-(O)_n-R1, -CON(R3)(R4) (wherein each of R3 and R4 is hydrogen, alkyl etc.), a

(wherein R5 is alkyl),

-CONHSO $_2$ CH $_3$, -CONHSO $_2$ CF $_3$, -COO-L-N(R3)(R4), -COO-L-CO-R1, -COO-L-CO-R1, -COO-L-CN, -COO-L-NO $_2$, -COOSi(R5) $_3$, -COO-N = C(R6)(R7) (wherein each of R6 and R7 is alkyl),

-COO-L-O-SO₂-R1, -COO-L-O-CO-R1, -COO-L-O-L-O-R1, -COO-L-Si(R5)₃, -C(O)S-R1, -C(S)O-R1, -C(S)S-R1, -L-O-R1, -L-O-R8 (wherein R8 is hydrogen or alkyl), -L-O-M, -L-O-L-M, -L-NR8R9 (wherein R9 is alkyl group), -L-O-CH₂Ph, -L-O-L-COOR9, -L-CN, -L-S(O)_n-R1, -L-S-L-O-R9, -L-O-COR9, -L-O-SO₂R9, -L-COOR8, -C=CHOR8 or -L-O-L-CN; Z is halogen, nitro, alkoxy, trifluoromethyl, cyano or -S(O)_nR10 (wherein R10 is alkyl or haloalkyl); V is a hydrogen atom, a halogen atom, an alkyl group having from 1 to 4 carbon atoms or an alkoxy group having from 1 to 4 carbon atoms, a haloalkyl group having from 1 to 4 carbon atoms, a haloalkyl group having from 1 to 4 carbon atoms, an alkoxyalkyl group having from 2 to 6 carbon atoms, an alkoxycarbonyl group having from 2 to 5 carbon atoms, a haloalkoxy group having from 1 to 3 carbon atoms, a nitro group, a cyano group or a -S(O)_n-R group (wherein n is as defined above and R is an alkyl group having from 1 to 4 carbon atoms); Q is hydrogen, alkyl, alkenyl, alkynyl, cyanomethyl, -C(O)-R11 (wherein R11 is phenyl group which

EP 0 282 944 A3

may be substituted, alkyl, alkoxy or hydroxyl), $-S(O)_2R11$, $-P(O)(OR11)_2$, -L-C(O)-R11, -L-C(O)-N(R12)(R13) (wherein each of R12 and R13 is hydrogen or alkyl), -L-R14 (wherein R14 is phenyl which may be substituted, alkyl, alkoxy or hydroxy), -L-N(R12)(R13), a -L-OR15 (wherein R15 is hydrogen, alkyl or alkenyl), -L-OC(O)R16 (wherein R16 is alkyl or alkoxy), $-L-S(O)_nR15$, -L-SC(O)R12,

(wherein each of L1 and L2 is methylene, oxygen or sulfur and R16 is hydrogen or alkyl), and a salt thereof, useful as a herbicide.



EUROPEAN SEARCH REPORT

Application Number

EP 88 10 3999

		NSIDERED TO BE RELEVA	T	
tegory		ent with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. CI.5)
Α	EP-A-0 203 428 (NISS	SAN CHEMICAL INDUSTRIES LTD.)	1,7-9	C 07 D 231/24
	* claims 1-11 *			C 07 D 231/30
				C 07 D 231/32
Α	GB-A-2 122 188 (NISS	SAN CHEMICAL INDUSTRIES LTD.)	1,7-9	C 07 D 231/20
	* claims *	•	, -	C 07 D 405/12
		- - -		C 07 D 409/12
Α	DE-A-2 513 750 (SAN	KYO CO. LTD.)	1,7-9	C 07 F 9/65
	* pages 20-24; claims *	•	.,,	C 07 F 7/08
		-		A 01 N 43/56
Α	PATENT ABSTRACTS	OF JAPAN vol. 6, no. 24 (C-92)(902),	1,7-9	A 01 N 57/16
	12 February 1982;	(1 ==/(-=/,	.,	A 01 N 55/00 //
		HIHARA SANGYO K.K.) 16.11.1981		C 07 C 149/40
	•			C 07 C 147/107
				C 07 C 63/68
				C 07 C 03/66
- 1	•		_	007 0 149/247
i		***		
i				
		i		
}				TECHNICAL FIELDS SEARCHED (Int. CI.5)
- 1		•		OCANOLIZ (III. OLD)
- 1	_			C 07 D 231/00
				C 07 D 405/00
- 1				C 07 D 409/00
				C 07 F 9/00
				C 07 F 7/00
		·]	A 01 N 43/00
				A 01 N 57/00
i				A 01 N 55/00
1			1	71 37 11 30/30
- 1			İ	
			l	
		•	Í	
		:	ĺ	
		,	[
			ĺ	
- 1			j	
		ļ	l	
L	The present search report h	nas been drawn up for all claims		
·	Place of search	Date of completion of search		Examiner
	Berlin	·	1	
	DALIII	04 April 91	I VA	N AMSTERDAM L.J.P.

- Y: particularly relevant if combined with another document of the same catagory
- A: technological background
- O: non-written disclosure
 P: intermediate document
 T: theory or principle underlying the invention

- the filing date D: document cited in the application
- L: document cited for other reasons
- &: member of the same patent family, corresponding document